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**National Highway  
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**Division of Arvin/Calspan  
[REDACTED] New York [REDACTED]**

**CALSPAN ON-SITE AIR BAG DEPLOYMENT INVESTIGATION**

**CALSPAN CASE NO. 93-9**

**VEHICLE #1 - 1990 FORD TAURUS GL (AIR BAG-EQUIPPED)**

**VEHICLE #2 - 1974 CADILLAC COUPE DEVILLE**

**LOCATION - [REDACTED]**

**CRASH DATE - [REDACTED] 1993**

**Contract No. DTNH22-94-A-07047**

**Prepared for:**

**U.S. Department of Transportation  
National Highway Traffic Safety Administration  
Washington, D.C. 20590**

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The crash investigation process is an inexact science which requires that physical evidence such as skid marks, vehicular damage measurements, and occupant contact points are coupled with the investigator's expert knowledge and experience of vehicle dynamics and occupant kinematics in order to determine the pre-crash, crash, and post-crash movements of involved vehicles and occupants.

Because each crash is a unique sequence of events, generalized conclusions cannot be made concerning the crashworthiness performance of the involved vehicle(s) or their safety systems.

# TECHNICAL REPORT STANDARD TITLE PAGE

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15. Supplementary Notes On-site investigation of an air bag deployment crash that resulted in fatal injuries to the unbelted 71 year old female driver.			
16. Abstract  <p>This crash investigation was conducted on-site and involved a 1990 Ford Taurus GL and a 1974 Cadillac Coupe deVille which collided in a front to rear 65 percent overlap impact configuration. The Ford Taurus was equipped with a Supplemental Restraint System (SRS) that consisted of a driver's side air bag which deployed during the impact sequence. The driver of the Ford Taurus GL was a 71 year old female with a height of 158 cm (62") and weight of 58.5 kg (129 lbs.) who sustained fatal injuries in the crash. She was not wearing the manual 3-point lap and shoulder belt system.</p> <p>Both vehicles were traveling south on a five lane asphalt roadway with a positive 1.7 percent slope in a 54 kph (35 mph) speed zone. There were two small dogs inside the Ford Taurus which may have distracted the driver prior to the crash. The frontal area of the Ford Taurus GL struck the rear of the Cadillac Coupe deVille at an impact speed of 32 kph (20 mph). The Cadillac was accelerating from a stopped position at a signalized 4-leg intersection when struck by the Ford. The Ford Taurus GL sustained maximum front bumper crush of 10.8 cm (4.25") from the 12 o'clock direction of force impact and experienced a velocity change of 16 kph (10 mph).</p> <p>The driver of the Ford came in contact with the air bag module cover and air bag during the air bag deployment sequence and subsequently sustained fatal injuries. Injuries suffered by the driver included: laceration of the brainstem (AIS-6); subdural hematoma of the cerebellum (AIS-5); subarachnoid hemorrhage over the cerebellum (AIS-3); bilateral rib fractures [right 1-8, left 1-9 (AIS-5)]; laceration of the right atrium (AIS-5); laceration of the aorta (AIS-4); and laceration of the liver (AIS-4). She also suffered fractures of the right shoulder and cervical vertebra, lacerations of the pericardium and mesentery, along with multiple soft tissue injuries (abrasions, contusions and lacerations) of the face, neck, chest, abdomen, and extremities (upper and lower). She was removed from the vehicle by [REDACTED] rescue personnel and transported by ambulance to a trauma hospital and pronounced DOA.</p>			
17. Key Words -Supplemental Restraint System (SRS), including air bag module cover, air bag module cover flaps, and air bag -Front to rear impact -Velocity change of 16 Kph (10.0 mph) for the Ford and 9 Kph (5 mph) for the Cadillac deVille -AIS-6 level injury for the driver of the Ford Taurus GL		18. Distribution Statement General Public	
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**CALSPAN ON-SITE AIR BAG DEPLOYMENT INVESTIGATION**  
**CALSPAN CASE NO. 93-9**  
**VEHICLE #1 - 1990 FORD TAURUS GL (AIR BAG EQUIPPED)**  
**VEHICLE #2 - 1974 CADILLAC COUPE DEVILLE**  
**LOCATION - [REDACTED], [REDACTED]**

**SUMMARY**

This crash investigation was conducted on-site and involved a 1990 Ford Taurus GL (Vehicle #1) which struck the rear of a 1974 Cadillac Coupe deVille (Vehicle #2) in a 65 percent overlap front to rear impact configuration. The Ford Taurus was equipped with a Supplemental Restraint System (SRS) which consisted of a driver's side air bag that deployed during the impact sequence. The Ford Taurus GL was driven by a 71 year old female with a height of 158 cm (62") and weight of 58.5 kg (129 lbs.). She was not wearing the manual 3-point lap and shoulder belt system and sustained fatal injuries.

The Ford Taurus GL was traveling south on a five lane, two way, positive 1.7 percent urban asphalt roadway in the right (curb) lane at a travel speed of approximately 40-48 kph (25-30 mph). The weather was clear (sunny) and the roadway was dry. The driver was en route from her place of employment to her residence with a possible stop at a shopping mall. The Cadillac Coupe deVille was stopped for a red traffic control light in the same travel lane as Vehicle #1 prior to the crash. The driver indicated to police he started from a stopped position when the light turned green. At that time, he noticed the approach of Vehicle #1, but was unable to accelerate out of the way due to vehicles in front of his vehicle.

There were two small dogs ([REDACTED]) in Vehicle #1 prior to the crash which were presumably allowed to roam around the interior. Large towels were attached to front and rear seat cushions to protect seat surfaces from pet traffic. From the punctate type abrasions on the driver's anterior and left side neck, it appeared her head was positioned forward and slightly to the right at impact. This position may have been in response to a momentary distraction by the dogs. A witness traveling directly behind Vehicle #1 prior to the crash described Vehicle #1's travel as normal speed for the area at 40-48 Kph (25-30 mph) and moving straight with no unusual vehicle movements.

The front of Vehicle #1 struck the rear of Vehicle #2 in a 65 percent overlap engagement configuration involving the left and center section of Vehicle #1 and the right and center section of Vehicle #2 at a CRASH 3 computed impact speed of 32 kph (20 mph) for Vehicle #1 and 10 kph (6 mph) for Vehicle #2. Vehicle #1 experienced a total delta V of 16 kph (10 mph) during the first impact which was sufficient to deploy the air bag system. The delta V for Vehicle #2 was computed at 9 Kph (5 mph).

Vehicle #1 sustained maximum front bumper crush of 10.8 cm (4.25") from the 12 o'clock direction of force, located 23.5 cm (9.25") right of the vehicle centerline. Vehicle #2 experienced maximum rear bumper crush of 4.4 cm (1.7") from the 6 o'clock direction of force, located 38.1 cm (15") right of the centerline.

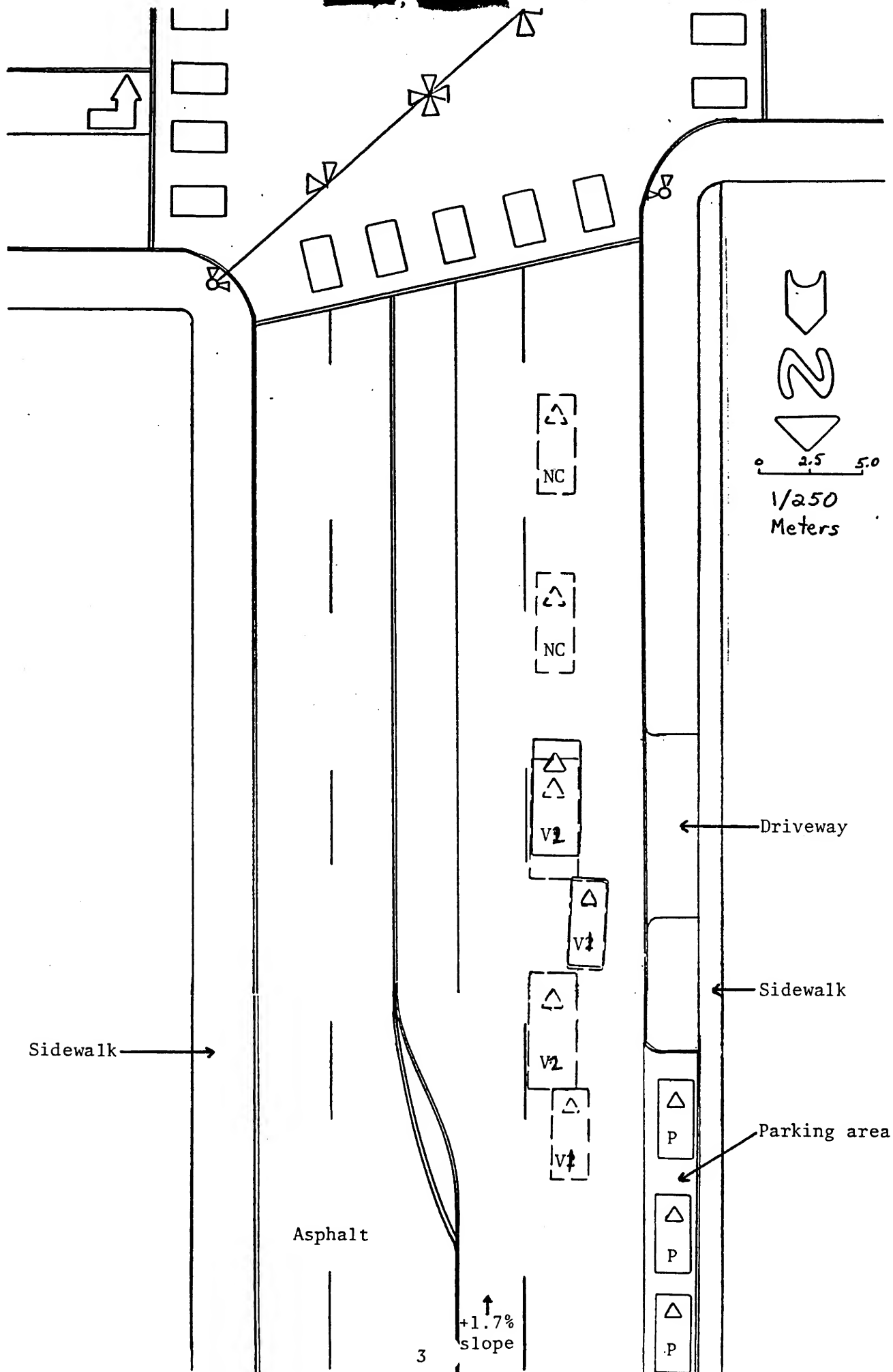
Vehicle #2 subsequently traveled forward 10.3 m (34.3 ft.) and was contacted again on the right rear bumper corner by the left front bumper of Vehicle #1. Vehicle #1 traveled to final rest approximately 0.1 m (0.3') following the second impact while Vehicle #2 traveled an additional 1.1 m (3.7 ft.) after this impact to final rest. The second impact resulted in minor contact damage to both vehicles with an estimated delta V of less than 1.6 kph (1.0 mph).

The driver of the Ford Taurus GL came in contact with the air bag module cover and air bag during the deployment sequence and subsequently sustained fatal injuries. Injuries suffered in the crash included: laceration of the brainstem (AIS-6); subdural hematoma of the cerebellum (AIS-5); subarachnoid hemorrhage over the cerebellum (AIS-3); bilateral rib fractures [right 1-8, left 1-9 (AIS-5)]; laceration of the right atrium (AIS-5); laceration of the aorta (AIS-4); and laceration of the liver (AIS-4). She also suffered fractures of the right shoulder and cervical vertebra, lacerations of the pericardium and mesentery, along with multiple soft tissue injuries (abrasions, contusions and lacerations) of the face, neck, chest, abdomen, and extremities (upper and lower). She was removed from the vehicle by [REDACTED] rescue personnel and transported by ambulance to a trauma hospital and pronounced DOA.

The driver of the Cadillac was transported to the emergency room by ambulance where he was treated and released for complaint of neck pain. The right front passenger sustained a scratch on the right arm and was not treated. The right rear passenger was not injured.

Vehicle #1 remained within its travel lane at final rest with an approximate 4° clockwise heading angle referenced to the travel lane. Vehicle #2 also remained in its travel lane at final rest with no change in heading angle from the pre-impact heading position.

Several police personnel responded to the crash scene, in-part, due to the type of head and neck injury reported by [REDACTED] personnel to the Ford driver which was described as a gunshot wound type injury. The hospital subsequently ruled out this preliminary finding through x-ray tests. This injury was caused by the interaction between the upper flap of the air bag module cover and the driver's gemstone necklace during the air bag deployment sequence.



**CALSPAN ON-SITE AIR BAG DEPLOYMENT INVESTIGATION**  
**CALSPAN CASE NO. 93-9**  
**VEHICLE #1 - 1990 FORD TAURUS GL (AIR BAG EQUIPPED)**  
**VEHICLE #2 - 1974 CADILLAC COUPE DEVILLE**  
**LOCATION - [REDACTED], COLORADO**

**CRASH DATA**

Location: Urban traffic way  
City/Township: [REDACTED]  
Area/Type: Urban/Commercial  
Crash Date/Time: [REDACTED] 1993, 1405 hours  
Investigating Police Agency: [REDACTED] Police Department  
Crash Type: Car/Car, front to rear impact sequence  
Air Bag Vehicle Maximum (AIS-6)  
Driver Injury Severity:

**AMBIENCE**

Viewing Conditions: Daylight  
Weather: Clear  
Precipitation: None  
Road Surface: Dry

**HIGHWAY**

Type: Arterial  
Number of Lanes: 5  
Width: 18 meters (60 feet)  
Surface: Asphalt  
Median: None  
Edge: West edge - Curb, 15 cm (6 in.) height

## HIGHWAY (CONT'D.)



East edge - Curb, 8 cm (3 in.) height

Vertical Alignment:	+1.7 percent slope
Horizontal Alignment:	Straight
Estimated Coefficient of Friction:	0.70
Traffic Density:	Light to moderate

## TRAFFIC CONTROLS

Signals:	Overhead and pole-mounted traffic signals
Signs:	None
Markings:	Full barrier yellow center lines and broken white lane lines, solid white left turn lane
Speed Limit:	56 kph (35 mph)

## VEHICLES

	<u>Vehicle #1 (Air Bag Vehicle)</u>	<u>Vehicle #2</u>
Description:	1990 Ford Taurus GL, 4 dr. sedan	1974 Cadillac Coupe deVille 2 dr. sedan
V.I.N.:		
Color:	Metallic blue	White
Odometer:	45,036 km (27,985 mi.)	161,253km (100,201mi.)
Engine:	6 cylinder, 3.0 liter	8 cylinder, 7.7 liter (472 cid)
Transmission:	4-speed automatic, column mounted selector lever	3-speed automatic, column mounted selector lever
Steering:	Power	Power
Brakes:	Power-assisted front discs and rear drums	Power-assisted front discs and rear drums

## VEHICLES (CONT'D.)

	<u>Vehicle #1 (Air Bag Vehicle)</u>	<u>Vehicle #2</u>
Padding:	Upper, mid, and lower instrument panel, knee bolster, soft edged steering wheel rim and air bag module cover, sunvisors, fold down center arm rests, four way adjustable head restraints, door panels, door arm rests, head liner	Upper, mid, and lower instrument panel, soft edged steering wheel rim with add-on vinyl covering, front center seat fold down arm rest, seat back rest, two way adjustable head restraint, door and side panel arm rests, head liner
Manual Restraints:	3-point lap and shoulder belts in the four outboard seated positions, lap belt in center front and center rear	3-point lap and shoulder belts in the front seat outboard seated positions, lap belt in the center front and three rear seating positions
Automatic Restraints:	Driver side air bag system	No automatic or supplemental restraints present
Defects:	None	None
Tow Status:	Towed due to vehicle damage	Not towed

## VEHICLE DAMAGE

### Vehicle #1

#### Exterior:

The frontal plane of the 1990 Ford Taurus GL (Vehicle #1) sustained light to moderate damage as the result of two impacts with the rear of the 1974 Cadillac Coupe deVille (Vehicle #2). Vehicle #1 sustained maximum crush of 10.8 cm (4.25") on the bumper face, 23.5 cm (9.25") right of the vehicle's centerline as the result of the first impact. Direct contact damage began at the left front bumper corner and extended 100.3 cm (39.5") to the right, ending at 23.5 cm (9.25") right of the centerline. The impact deformed the entire frontal plane resulting in a combined induced and direct contact damage length of 149.2 cm (58.75"). Crush values at bumper level were:

$C_1 = 5.1 \text{ cm (2.0")}$ ,  $C_2 = 4.5 \text{ cm (1.75")}$ ,  
 $C_3 = 5.7 \text{ cm (2.25")}$ ,  $C_4 = 8.9 \text{ cm (3.5")}$ ,  
 $C_5 = 10.6 \text{ cm (4.25")}$ ,  $C_6 = 0 \text{ cm}$ .

The maximum crush pattern on the bumper extended vertically into the grille panel and hood edge and aligned with the protruding vertical design of the Cadillac's right rear taillight assembly. The front bumper energy absorbing devices (EADs) compressed during the crash with stroke values of 0.25 cm (0.1") for the right EAD and 4.8 cm (1.9") for the left EAD. Both EADs rebounded to the full restitution position of 5.7 cm (2.25").

The second impact sequence involved a 2.5 cm (1") contact pattern on the left front bumper surface and a maximum crush value of 1.3 cm (0.5"). This was located 20.3 cm (8") right of the left bumper corner.

Components damaged by the frontal impact sequence included the bumper, grille panel, radiator, and hood. The windshield experienced a stress crack which may have been previously initiated by a small stone chip in the glazing and elongated by crash forces. All doors were operational post-crash. The wheelbase dimensions were unchanged from original manufacturers specifications. A damage pattern on the right rear fender and taillight assembly was unrelated to the crash.

CDC:	<u>Event Number</u>	<u>Object Struck</u>
	1	12-FYEW-1 Vehicle #2
	2	12-FLLN-1 Vehicle #2

Repair Cost: Estimated at \$9,000 by insurance carrier (total loss)

**Interior:** Interior damage was associated with contacts by the driver during the crash event. The steering column was displaced forward with movement of 7.0 cm (2.75") at the left shear capsule and 6.4 cm (2.5") at the right shear capsule. This displacement was the result of direct contact by the driver's thoracic area on the air bag module cover during the air bag deployment sequence. The upper half of the steering wheel rim was displaced forward 0.6 cm (0.25") by the air bag.

The driver's right knee contacted the knee bolster identified by a skin oil transfer of 7.6 cm (3") located 29.2 cm (11.5") left of the vehicle's centerline and 5.8 cm (2.3") right of the steering column. The lower left instrument panel in the vicinity of the light dimmer control switch exhibited a whitish skin transfer which began 50.8 cm (20") left of the center line and continued 16.5 cm (6.5") toward the driver's



door. This was attributed to the driver's left knee contact. The upper edge of the instrument panel exhibited a minor downward indentation which was 14 cm (5.5") long and began 7.6 cm (3") left of the vehicle centerline. This was attributed to contact by the driver's right arm.

A whitish scuff along the head liner measuring 22.9 cm (9") in length and approximately 5 cm (2") in width began 17.8 cm (7") rearward of the windshield header at the vehicle's centerline and ended 40.6 cm (16") rear of the windshield header and 6.4 cm (2.5") left of the centerline. This was attributed to contact by the driver's right arm. The left forward corner of the courtesy light bracket mounted on the head liner and located 59 cm (23.25") rear of the windshield header, exhibited a whitish skin transfer which was attributed to contact by the driver's left scalp.

The driver's side head restraint was slightly abraded and rotated downward. The abraded area was located on the front upper surface of the head restraint and measured 8.9 cm (3.5") laterally by 3.2 cm (1.5") vertically and was attributed to contact by the posterior area of the driver's left arm. The head restraint was rotated downward to a 35° position which was 27° greater than the 8° angle of the right head restraint.

The upper flap of the air bag module cover exhibited abraded surface damage which was attributed to the interaction with the driver's necklace during the air bag deployment sequence. For documentation purposes, the abraded surface damage was divided into three areas. The largest and most visible area began along the bottom edge of the upper flap at 9.5 cm (3.75") right of the left corner and extended 10.8 cm (4.25") diagonally upward to the left, ending 3.2 cm (1.25") from the left side edge of the flap.

The second area of abrasion marks began 3.8 cm (1.5") left of the right side of the flap along the bottom edge of the upper flap and extended 10.8 cm (4.25") vertically and 6.4 cm (2.5") to the left of the right side edge. The width of the abraded pattern varied from 3.1 cm (1.2") at the bottom to 1 cm (0.4") at the top.

The third area involved a small abrasion mark measuring 1.3 cm (0.5") long and 0.25 cm (0.1") high. This mark was located along the bottom edge of the upper flap and 7.6 cm (3") left of the right edge of the flap.

There were three skin transfer marks noted on the upper air bag module flap which were attributed to contact with the driver's neck during the air bag deployment sequence. The first was 1.3 cm (0.5") wide and began 1.9 cm (0.75") right of the left flap corner along the horizontal seam edge. This transfer extended vertically 6.4 cm (2.5"). The second transfer was also 1.3 cm (0.5") wide and began 4.8 cm (1.9") right of the left flap corner along the horizontal seam edge. This transfer extended vertically 7.0 cm (2.75"). The third transfer began 8.9 cm (3.5") left of the right corner along the bottom edge of the flap and ended 4.4 cm (1.75") above the seam line. This transfer was 1.3 cm (0.5") wide and less visible than the other skin transfer marks.

Deposits of generant residue from the air bag were noted on the surfaces of the cruise control buttons located on both the left and right sides of the air bag module at the 3 o'clock and 9 o'clock positions. This aligned with the location of the air bag vent ports.

The driver's seat appeared to be adjusted in the full forward position with the leading edge of the seat cushion 1.3 cm (0.5") rearward from the instrument panel (referenced vertically from the surface of the mid instrument panel at the level of the steering column) and 52.1 cm (20.5") rearward from the toe pan. The angle of the seatback rest was 21° rearward from vertical and located 62.2 cm (24.25") from the instrument panel measured horizontally at the level of the steering column and 48.3 cm (19") rearward from the post impact position of the steering wheel center. This seat was approximately 15.2 cm (6") forward of the right front seat.

## **Vehicle #2**

### **Exterior:**

The rear plane of the 1974 Cadillac Coupe deVille sustained light damage as the result of the two impacts with the frontal plane of the 1991 Ford Taurus GL. Vehicle #2 sustained a maximum crush value of 4.4 cm (1.7") on the rear bumper, 38.1 cm (15") right of the vehicle's centerline. Direct contact began at the right rear bumper corner and extended 87.6 cm (34.5") to the left, ending at the centerline of the vehicle. The impact deformed the entire rear plane resulting in a combined induced and direct damage length of 172.7 cm (68"). Crush values at bumper level were:

$$C_1 = 0.5 \text{ cm (0.2")}, \quad C_2 = 1.9 \text{ cm (0.75")},$$

$C_3 = 3.2 \text{ cm (0.75")}$ ,  $C_4 = 3.8 \text{ cm (1.5")}$ ,  
 $C_5 = 4.1 \text{ cm (1.6")}$ ,  $C_6 = 3.2 \text{ cm (0.75")}$ .

An imprint of Vehicle #1's license plate was located along the bumper rub strip 47.6 cm (18.75") right of the centerline and extended 24.1 cm (9.5") to the right. The rear bumper EADs compressed during the crash with stroke values of 5.4 cm (2.1") for the left and 5.7 cm (2.25") for the right. Both EADs rebounded after the crash to full restitution at 5.7 cm (2.25").

Components damaged included the bumper, upper valence panel, bumper rub strips, right fender, and base of the upper C-pillar. The wheelbase dimensions were unchanged from original manufactured specifications. The doors were operational post crash. There was no glazing damage noted.

CDC:	<u>Event Number</u>		<u>Object Struck</u>
	1	06-BZEW-1	Vehicle #1
	2	06-BRLS-1	Vehicle #1

Repair Cost: Not available.

Interior: The interior was not damaged during the crash. The right front occupant reportedly sustained a scratch of the right upper arm as the result of contacting the right door lock button during the crash. The lock button was not damaged.

## VEHICLE VELOCITY ESTIMATES

	<u>Vehicle #1</u>	<u>Vehicle #2</u>
Travel Speed:	40-48 kph (25-30 mph)	Starting from a stop, 0-10 kph (0-6 mph)
Impact Speed:	32 kph (20 mph)	10 kph (6 mph)
Total $\Delta V$ :	16 kph (10 mph)	9 kph (5 mph)
Longitudinal $\Delta V$ :	-16 kph (-10 mph)	9 kph (5 mph)
Lateral $\Delta V$ :	1 kph (0 mph)	0 kph (0 mph)
Energy Absorption:	13152 joules (9699 ft.lbs.)	8178 joules (6032 ft.lbs.)

The velocity estimates were computed by the damage and trajectory algorithm of the CRASH3 program. Travel speed of vehicle #1 was derived from police records and witness testimony. Change in velocity estimates for both vehicles appear to be consistent with damage severity.

## COLLISION SEQUENCE

### Pre-Crash:

The Ford Taurus GL was traveling south on a five lane, two way, urban asphalt roadway at approximately 40-48 kph (25-30 mph) in the right (curb) lane. The driver was en route from her place of employment to her residence with a possible stop planned at a shopping mall. The Cadillac Coupe deVille was reportedly stopped for a red traffic control light in Vehicle #1's travel lane. The driver indicated to police that he started from the stopped position when the the light turned green. At that time, the driver of Vehicle #2 noticed the approach of Vehicle #1, but was unable to accelerate out of the way due to vehicles in front of his vehicle.

The driver of Vehicle #1 had two small dogs (schnauzers) in her vehicle which were allowed to roam around the interior. Large towels were attached to the seat cushions to presumable protect seat surfaces from pet traffic. From the injury pattern on the driver's neck (punctate abrasions of the anterior and left side of the neck), it appears the driver may have been looking slightly toward the right. This may have been in response to the presence of the dogs which may have been a momentary distraction.

A witness traveling directly behind Vehicle #1 for a period of time before the crash described Vehicle #1's travel as normal speed for the area at around 40-48 kph (25-30 mph) and moving straight with no unusual vehicular movements. From the location of the right knee contact on the knee bolster, it appears likely the driver of Vehicle #1 at some point prior to impact recognized the impending danger and removed her foot from the accelerator pedal. There was no evidence of pre-impact braking.

### Crash:

The front of Vehicle #1 struck the rear of Vehicle #2 in a 65 percent overlap engagement configuration involving the left and center sections of Vehicle #1 and the right and center sections of Vehicle #2 at a CRASH3 computed impact speed of 32 kph (20 mph) for Vehicle #1 and 10 kph (6 mph) for Vehicle #2. Vehicle #1 experienced a delta V of 16 kph (10 mph) while the delta V for Vehicle #2 was 9 kph (5 mph). The delta V for Vehicle #1 was sufficient to deploy the air bag.

Vehicle #2 subsequently traveled forward 10.3 m (34.3 ft.) and was contacted a second time on the right rear bumper corner by the left front bumper of Vehicle #1. Vehicle #1 traveled to final rest approximately 0.1 m (0.3') following this impact while Vehicle #2 traveled 1.1 m (3.7 ft.) to final rest. The second impact resulted in minor contact damage to both vehicles with an estimated delta V of less than 1.6 kph (1.0 mph).

**Post-Crash:**

**Final Rest -**

Vehicle #1 remained within its travel lanes, but was heading approximately 4° clockwise from its pre-crash heading of straight ahead. Vehicle #2 also remained straight ahead and parallel to the lane line in its travel lane with no changes noted from its pre-crash heading direction.

**Driver Activities -**

The driver of Vehicle #1 was sitting in the driver seat with her head slumped forward and unresponsive at final rest. She was removed by ambulance personnel and transported to the hospital where she was pronounced dead on arrival.

The driver of Vehicle #2 was initially dazed by the crash and remained in his vehicle for approximately thirty seconds at final rest. He exited his vehicle and went back to Vehicle #1. By the time he arrived, three citizens were already viewing the driver and checking for vital signs. He was subsequently transported by ambulance to the hospital with complaint of neck pain.

**Police Activities -**

Several police personnel responded to the crash scene, in-part, due to the type of injury reported by ██████ personnel to the head and neck of the Ford driver. They described the punctate injury pattern as having the appearance of a gunshot wound. In response to this report, four city police officers, one sergeant, and four detectives, responded to the scene. Three detectives, however, withdrew from the investigation when x-ray tests taken at the hospital determined the injury was not the result of a weapon discharge.

**Rescue Activities -**

A city fire department pumper and two ambulances from the hospital responded to the scene. The driver of vehicle #1 was removed from her vehicle by two paramedics and transported to a trauma hospital. The driver of vehicle #2 was determined by rescue personnel to have sustained non life-threatening injuries and was transported to an emergency room at a second hospital where he was treated and released.

**Scene Clearance -**

The Ford Taurus GL was towed from the scene and taken to the County Sheriff's impound lot where it was covered with a

locked security blanket pending this investigation. The Cadillac Coupe deVille was driven from the scene.

## HUMAN FACTORS/OCCUPANT DATA

	<u>Air Bag Vehicle (Vehicle #1)</u>	<u>Vehicle #2</u>
Driver:	71 year old female	34 year old male
Height:	157.5 cm (62")	188 cm (74")
Weight:	58.5 kg (129 lbs.)	99.8 kg (220 lbs.)
Occupation:	Part-time office personnel in son's business	Unknown
Active Restraint System Usage:	Available manual 3-point lap and shoulder belt not used	Available manual 3-point lap and shoulder belt not used
Usage Source:	Vehicle inspection, police records, witness testimony	Vehicle inspection
Eyewear:	Framed corrective lenses	None
Jewelry:	Gemstone necklace	None
Vehicle Familiarity:	Purchased vehicle new and was primary driver	Owned vehicle approximately one year
Route Familiarity:	Routinely traveled	Routinely traveled
Trip Plan:	Left work and was returning to residence. Son speculated driver may have planned to shop at a mall en route home	Returning to residence
Mode of Transport From Scene:	Ambulance	Ambulance
Type of Medical Treatment:	Pronounced dead on arrival at the hospital	Treated and released

Occupants:

2 small dogs ( [REDACTED], not injured)

Right front seat, 10 year old male, 145 cm (57"), 32 kg (65 lbs.), not wearing available manual 3-point lap and shoulder belt, scratch on upper arm from door lock

Right rear seat, 13 year old female, 160 cm (63"), 59 kg (120 lbs.), not wearing available manual lap belt, not injured.



## DRIVER INJURIES (Vehicle #1)

<u>Injury</u>	<u>Severity (OIC/AIS)</u>	<u>Source</u>
1. Laceration of the brainstem, partial separation of the anterior pontomedullary junction in the region of the cervical fracture.	Maximum (140212.6,8)	Air bag
2. Subdural hematoma of the cerebellum, there is extensive blood in the subdural space around the base of the brain.	Critical (140445.5,6)	Air bag
3. Subarachnoid hemorrhage over the cerebellum.	Serious (140466.3,6)	Air bag.
Subarachnoid hemorrhage over the cerebral convexities, however, over the lateral surfaces of the temporal and parietal lobes there is extravasation of blood into the subarachnoid space. This becomes prominent over the undersurface of the brain and is most prominent over the cerebellum.		
4. Fractured ribs with bilateral hemothorax, right 1st through 8th ribs over the anterolateral surface, left 1st through 9th ribs over the anterolateral surface.	Critical (450242.5,3)	Upper flap of air bag module cover and air bag
5. Laceration of the right atrium, 1 cm intimal tear over the endocardial surface of the anterior right atrium just below the right atrial appendage.	Critical (441012.5,4)	Upper flap of air bag module cover and air bag
6. Laceration of the aorta, partial aortic tear which involves the total thickness of the wall and approximately 75% of the circumference.	Severe (420208.4,4)	Upper flap of air bag module cover and air bag

## DRIVER INJURIES (CONT'D.)

7. Laceration of the liver, several linear capsular tears over the left lobe of the liver, over the right lobe there are deep stellate lacerations predominantly over the anterior and lateral surface which almost transect the liver.	Severe (541826.4,1)	Lower flap of air bag module cover and air bag
8. Fracture of the anterior margin of both superior vertebral articular facets.	Serious (650222.3,6)	Upper flap of air bag module cover and air bag
9. Dislocation of the atlanto-occipital joint with tearing of the anterior atlanto-occipital membrane, apical dental ligament and tectorial membrane.	Moderate (650208.2,6)	Upper flap of air bag module cover and air bag
10. Lacerations of the mesentery, superficial lacerations of the small bowel mesentery.	Moderate (542022.2,8)	Lower flap of the air bag module cover and air bag
11. Laceration of the pericardium, partial tear through the superior pericardium anteriorly.	Moderate (441602.2,4)	Upper flap of the air bag module cover and air bag
12. Extensive soft tissue hemorrhage into the anterior and posterior mediastinum.	Moderate (441804.2,4)	Upper flap of the air bag module cover and air bag
13. Dislocation of right acromioclavicular joint with abundant surrounding hemorrhage.	Moderate (750230.2,1)	Air bag
14. Contusion of the head, ovoid 3 cm subgaleal hemorrhage in the left frontal region.	Minor (190402.1,2)	Courtesy light bracket
15. Laceration of upper lip, 1 cm laceration over left mid upper lip mucosa, 0.4 x 0.2 cm superficial laceration just above left lateral upper lip.	Minor (290602.1,8)	Air bag (driver's necklace)

## DRIVER INJURIES (CONT'D.)

16. Contusion over the left mid upper lip mucosa, 1 x 0.5 cm purple contusion just below right naris.	Minor (290402.1,8)	Air bag
17. 1.5 cm waxy yellow abrasion just lateral to right side of mouth, extending up from this are two linear, parallel, vertical, waxy yellow abrasions 1.5 cm and 2.8 cm long.	Minor (290202.1,8)	Air bag
18. Contusion of the right cheek, 19. faint purple contusion 1.5 cm indiameter with central punctate abrasions over right zygoma	Minor (290402.1,1), Minor (290202.1,1)	Air bag (driver's necklace)
20. Abrasion of the right ear, 0.6 x 0.2 cm abrasion over superior helix.	Minor (290202.1,1)	Air Bag
21. Abrasions of the anterior neck, multiple waxy abrasions over anterior neck just under the jaw extending from right side to left side of the neck, total dimension 14 cm horizontal by 9 cm vertical.  Abrasions of the right neck over the right side and anterior neck, the waxy yellow abrasion is more confluent and measures up to 7.7 cm in vertical diameter.  Over left side of neck, the abrasion has an irregular appearance varying from punctate to linear to irregular in shape.	Minor (390202.1,0)	Upper flap of the air bag module cover (driver's necklace)
22. Contusion of the left neck, blue-purple contusion over left anterior and left neck below angle of mandible.	Minor (390402.1,2)	Upper flap of the air bag module cover and air bag
23. Lacerations of the left neck just below left side of chin, there are superficial lacerations up to 0.5 cm.	Minor (390602.1,2)	Upper flap of the air bag module cover

## DRIVER INJURIES (CONT'D.)

- |                                                                                                                                                                                                                                                                                                                                          |                    |                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------------------------------------|
| 24. Contusions of the whole chest, right subclavicular area to right epigastrium, also medial surface left breast, entire area 29.5 cm x 28 cm (vertical x horizontal). Most prominent over midportion of sternum and medial left breast.                                                                                                | Minor (490402.1,0) | Upper flap of the air bag module cover and air bag         |
| 25. Abrasions of the chest, from just below right clavicle to inferior sternum there are linear to irregularly shaped abrasions including punctate abrasions, the largest of these have an irregular appearance and measured up to 5.5 cm.<br><br>Linear area of punctate abrasion up to 4 cm x 0.2 cm in diameter over the right axilla | Minor (490202.1,0) | Upper flap of the air bag module cover (driver's neckline) |
| 26. Contusion of the abdomen, 1.2 cm ovoid blue contusion over the left mid-abdomen.                                                                                                                                                                                                                                                     | Minor (590402.1,4) | Lower flap of the air bag module cover                     |
| 27. Contusion of left upper arm, ovoid 1.5 cm brown contusion over posterolateral left upper arm.<br><br>Contusion of the left posterior armpit, faint yellow-green, 2 x 0.8 cm contusion over left posterior axillary fold.                                                                                                             | Minor (790402.1,2) | Driver side head restraint                                 |
| 28. Contusions of the left upper arm, several ovoid blue contusions up to 1 cm in diameter over anterior left biceps.<br><br>Contusion of the left forearm, ovoid brown, 2 cm contusion over anterior left forearm.                                                                                                                      | Minor (790402.1,2) | Air Bag                                                    |

## DRIVER INJURIES (CONT'D.)

29. Contusion of the left wrist, 8 x 3.5 cm blue contusion over posterolateral left wrist, 4 cm contusion over back of left hand at base of left index finger with 0.5 cm purple contusion over back of base of left little finger.	Minor (790402.1,2)	Left front door panel
30. Contusion of the right upper arm mottled, blue to purple contusion up to 9.5 cm in diameter over anterior right biceps.  Right armpit two ovoid blue contusions, 1.7 cm in diameter over right anterior axillary fold.  0.5 cm purple contusion over back of mid-right index finger with a 3 cm contusion over back of base of right middle finger.	Minor (790402.1,1)	Air bag
31. Abrasion of right hand, 0.2 cm ovoid abrasion.	Minor (790202.1,1)	Head liner
32. Contusion of the right forearm, linear 2 cm x 0.2 cm purple contusion over back of right forearm.  Contusion of right hand, 6 x 1.5 cm blue-purple contusion over back of right hand.	Minor (790402.1,1)	Upper instrument panel
33. Contusion of the right scapula, faint 0.5 cm blue contusion.	Minor (790402.1,1)	Driver side seat backrest.
34. Contusion of the left thigh, multiple ovoid, purple to dark purple to green-brown contusion over an area 20 cm (vertical) x 15 cm (horizontal) and individually varying from 0.5 cm up to 2.5 cm in diameter.	Minor (890402.1,2)	Steering wheel rim

## DRIVER INJURIES (CONT'D.)

35. Contusion of the right lower leg, faint blue, 2 cm ovoid contusion over anterior right lower leg.	Minor (890402.1,1)	Lower instrument panel
36. Contusion of the right knee, 1 cm faint purple contusion.	Minor (890402.1,1)	Knee bolster
37. Abrasion of the right knee, 2 x 0.5 cm abrasion.	Minor (890202.1,1)	Knee bolster
38. Contusion of the left knee, faint 2 cm blue contusion overlies left patella.	Minor (890402.1,2)	Lower instrument panel and light dimmer switch
39. Contusion of the left calf, 2.2 x 0.8 cm blue contusion over back of left calf.	Minor (890402.1,2)	Driver's side seat cushion

### Blood in Cavities

100 cc blood in right chest cavity  
300 cc blood in left chest cavity  
400 cc blood in abdominal cavity

## DRIVER KINEMATICS

The driver of the Ford Taurus GL was sitting directly in front of the steering wheel just prior to the crash. Her seat was adjusted to the full forward position with the seat back rest approximately 41 cm (16.25") horizontally rearward from the original location (i.e., pre-displaced position) of the steering wheel hub. The punctate and soft tissue abrasion pattern to the left frontal area of her neck suggest the driver may have been looking slightly toward the right side of the vehicle just prior to impact. This may be the result of viewing one or both dogs in her vehicle at the time of the crash.

Soft tissue injuries noted on the driver's extremities suggest that the driver's hands were on the steering wheel rim in the 10 and 2 o'clock positions. Her right leg appeared to be in the area of the brake pedal from the right knee contact evidence noted on the knee bolster which was located 5.8 cm (2.3") right of the steering column. The left leg was positioned approximately 14 cm (5.5") left of the steering column. The 3-point manual lap and torso belt had indications of previous usage, but the kinematic pattern, vehicle interior contact points, and type of injuries indicated the belt system was not used at the time of the crash. Some eyewitness accounts, however, describe the position of the torso belt as being over the driver's left shoulder and not latched upon their inspection of the driver immediately after the crash. The investigating officer listed the restraint as not used prior to crash.

The driver, just prior to impact, may have realized the impending danger and removed her foot from the accelerator pedal. There was not indication the driver applied the brakes prior to impact. At impact, the driver's right knee contacted the knee bolster 5.8 cm (2.3") right of the steering column which was noted by a 7.6 cm (3") skin oil transfer. The left knee contacted the left side of the knee bolster and dimmer switch control panel 14 cm (5.5") left of the steering column which was noted by a whitish skin transfer.

The driver's upper body was in contact with the air bag module at the time of air bag deployment. A linear horizontal imprint on the driver's chest just below the breast line [approximately 22.2 cm (8.75") below the top of the shoulders] was attributed to the parting seam of the upper and lower flaps of the air bag module cover (see photos 81, 82 on page 68). The lower flap rotated downward contacting the lower chest and upper abdominal region resulting in lacerations of the liver and small bowel mesentery. The upper flap of the module after initially contacting her chest rotated vertically upward as designed and contacted her neck and chin. Punctate type wounds observed on the driver's chest and neck were the result of the interaction between the flap and the driver's gemstone necklace. This was consistent with the abraded (scratch) marks noted on the surface of the flap.

The steering column was displaced approximately forward 7 cm (2.75") as the result of the driver being in contact with the air bag module cover during the initiation of the air bag deployment sequence. The air bag contacted the driver's lips during deployment as noted by the red lipstick transfer on the instrument panel side of the air bag near the top peripheral seam. The driver's left arm and hand were subsequently displaced laterally by the air bag and contacted the left door surface, resulting in a contusion of the left wrist. The right hand and forearm contacted the upper instrument panel, right of the steering wheel rim, and resulting in a 2 cm x 0.2 cm contusion over the back of the forearm and right hand. The air bag and upper flap elevated and rotated the driver's head rearward resulting in a laceration of the brainstem, subdural hematoma, subarachnoid hemorrhage, and dislocation of the atlanto-occipital joint. The driver's upper body was subsequently propelled upward and rearward in the vehicle.

Her left thigh contacted the bottom of the steering wheel rim which deflected the leg downward. The back of the left calf then contacted the seat cushion resulting in a 2 cm x 0.8 cm contusion. She subsequently contacted the left front corner of the courtesy light bracket with the left frontal head region resulting in a 3 cm (1.2") ovoid contusion. A skin transfer of 0.6 cm (0.25") was noted on the left front corner of the light. The rearward motion of the driver's torso was halted following the contact with the bracket.

A large skin transfer mark measuring approximately 22.7 cm (9") in length and 5 cm (2") in width on the head liner [located 17.8 cm (7") rearward of the windshield header at the vehicle centerline, extending rearward 40.6 cm (16") from the windshield header and 5 cm (2.5") left of the centerline] from contact of the driver's right hand/forearm as the driver's torso was rebounding and moving to the left. The posterior area of her left arm contacted the driver side head restraint resulting in contusion. This contact correlated with the abraded top frontal surface of the head restraint. The driver's torso descended into the driver's seat with legs extended forward on the floor. Her upper body then slumped forward to the final rest position.

## SUPPLEMENTAL RESTRAINT SYSTEM

The 1990 Ford Taurus GL was equipped with a supplemental driver air bag system that deployed as a result of the vehicle's frontal impact with the rear of a 1974 Cadillac deVille. The air bag module cover opened along the designed tear points with approximately 84 percent of the module cover forming the upper flap. The upper flap measured 13.3 cm (5.25") along the vertical surface from the horizontal seam line and continued forward 3.8 cm (1.5") along the top plane. The lower flap measured 2.5 cm (1") along the vertical surface. The lateral width of the module flaps at the vertical seams was 21 cm (8.25") and the thickness was 0.3 cm (0.125"). Both flaps contacted the driver during the deployment sequence.

The air bag was tethered with four internal straps and attached to the air bag surface forming an octagonal shaped center reinforcement. The bag measured 64.1 cm (25.25") in diameter with the circumference stitched with a finish seam design. A moderate amount of generant residue from the air bag was noted on the surfaces of the cruise control buttons located on both the left and right sides of the air bag module at the 3 o'clock and 9 o'clock positions. The location of the residue aligned with the position of the air bag vent ports.

The air bag module cover, in particular the upper flap surface, was abraded and contained skin transfer marks (see photograph 41 on page 48) as the result of contact with the driver during the deployment sequence. These marks were separated into areas for documentation purposes. The largest and heaviest area of abrasion marks varying in width from 1.9 cm (0.75") at the bottom to 2.5 cm (1.0") at the top began along the bottom edge of the upper flap 9.5 cm (3.75") right of the left corner and extended 10.8 cm (4.25") diagonally upward to the left and ending 3.2 cm (1.25") from the left edge of the flap.

Another area of abrasion marks began at the bottom edge of the upper flap 3.8 cm (1.5") left of the right side of the flap and extended 10.8 cm (4.25") vertically and toward the left, 6.4 cm (2.5") left of the right edge of the flap. The width of the abraded pattern varied from 3.1 cm (1.2") at the bottom to 1 cm (0.4") at the top.

A small abrasion mark measuring 1.3 cm (0.5") long and 0.25 cm (0.1") high was located along the bottom edge of the upper flap, 7.6 cm (3") left of the right edge of the flap. These marks were

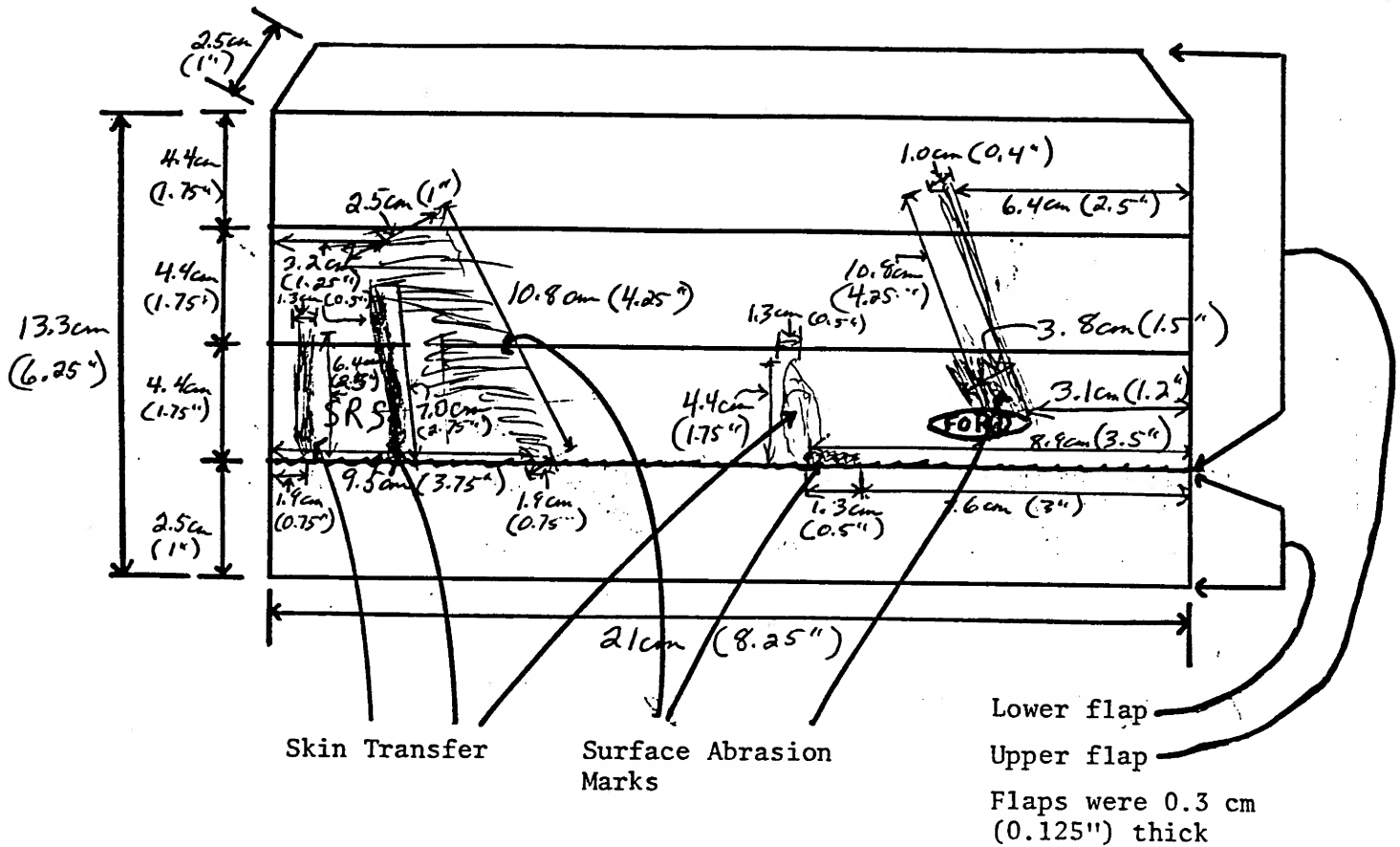


attributed to the interaction of the air bag flap with the driver's necklace as it was pressed against the driver's torso and neck during the deployment sequence.

There were three skin transfer marks noted on the upper air bag module flap attributed to contact with the driver's neck during the air bag deployment sequence. The first was 1.3 cm (0.5") wide and began 1.9 cm (0.75") right of the left flap corner along the horizontal seam edge. This transfer extended vertically 6.4 cm (2.5"). The second transfer was also 1.3 cm (0.5") wide and began 4.8 cm (1.9") right of the left flap corner along the horizontal seam edge. This transfer extended vertically 7.0 cm (2.75"). The third transfer began 8.9 cm (3.5") left of the right corner along the bottom edge of the flap and ended 4.4 cm (1.75") above the seam line. This transfer was 1.3 cm (0.5") wide and less visible than the other skin transfer marks.

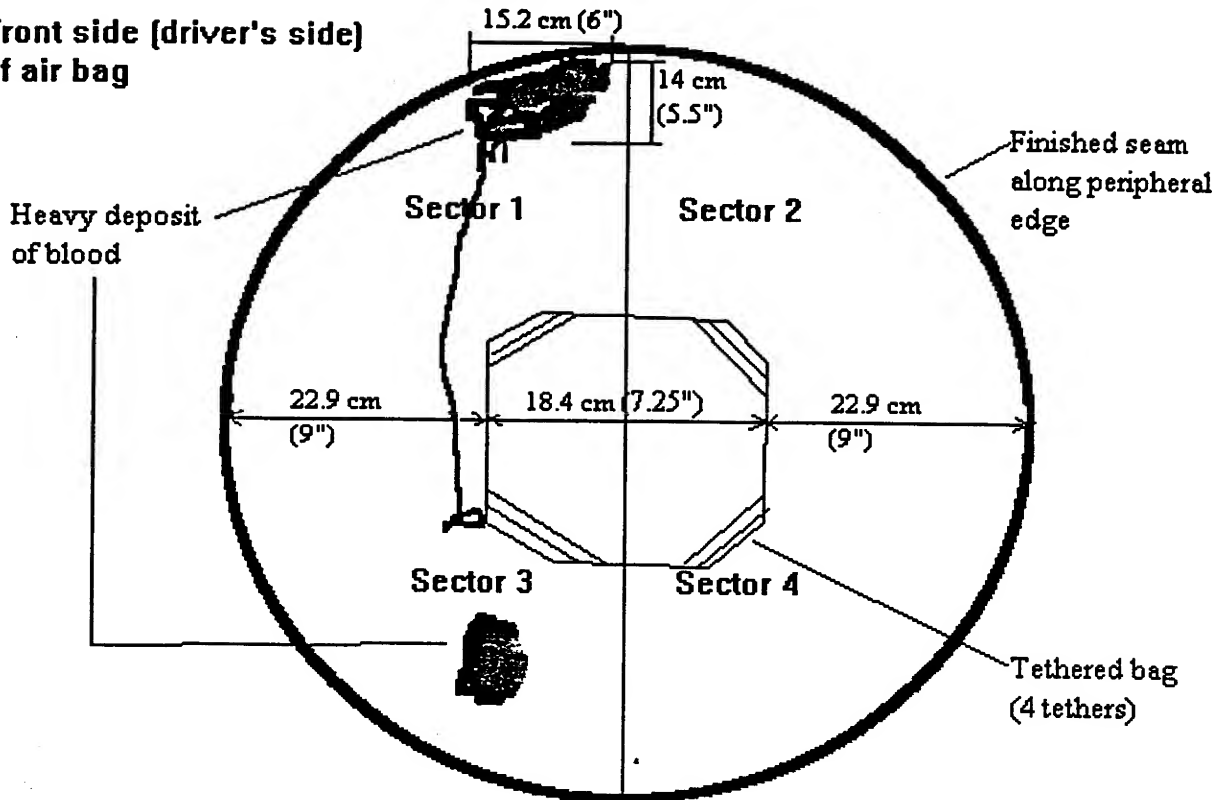
A red lipstick transfer was noted on the instrument panel side of the air bag along the top peripheral seam line left of the center line. Blood deposits from the driver were noted in the upper left and lower left quadrants (Sectors 1 and 3).

Vehicle #1 - Air Bag Module Cover

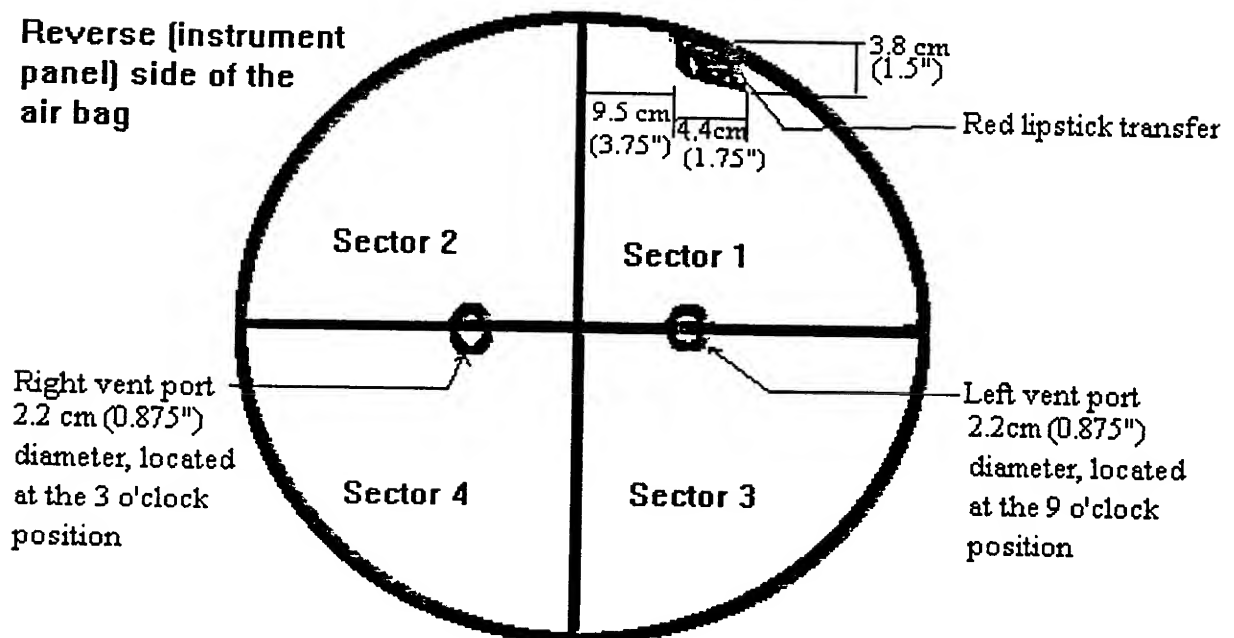


## AIR BAG CONTACTS

**Front side (driver's side)  
of air bag**



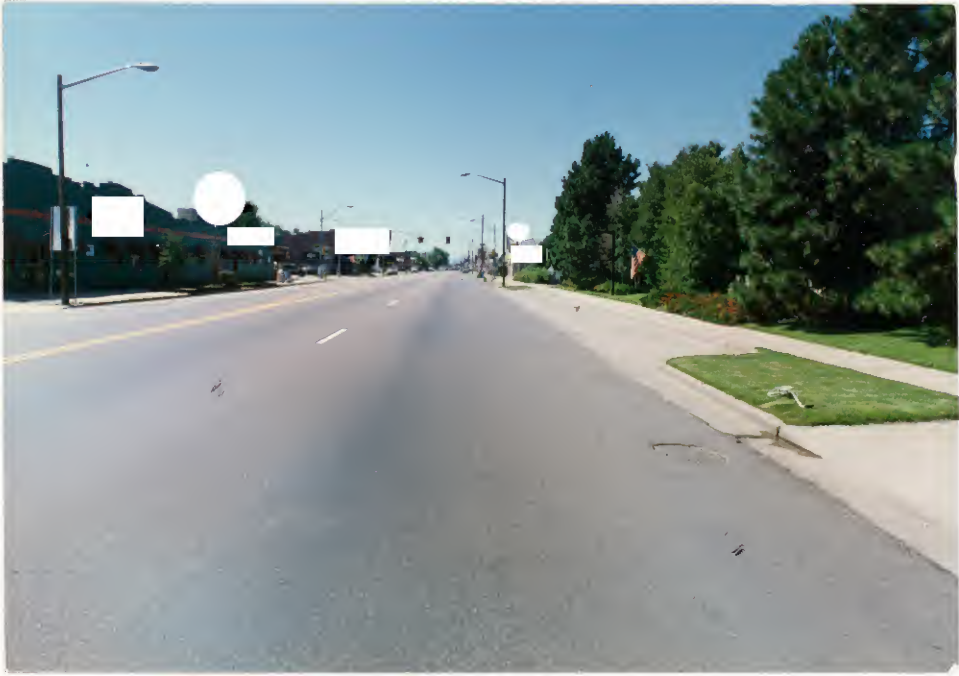
**Reverse (instrument  
panel) side of the  
air bag**



## VEHICLE #2 OCCUPANT INJURIES

<u>Injury</u>	<u>Severity (OIC/AIS)</u>	<u>Source</u>
Driver - Neck Strain	Minor (640278.1,6)	Impact forces
Right Front Passenger - Laceration of forearm	Minor (790600.1,1)	Right door lock button

## SELECTED PRINTS



1. Trajectory of the 1990 Ford Taurus GL (Vehicle #1) approximately 45 m (150') prior to point of impact (POI) with the Cadillac DeVille (Vehicle #2)



2. Trajectory of Vehicle #1 approximately 30 m (100') prior to the POI



3. Trajectory of Vehicle #1 approximately 15 m (50') prior to the POI



4. Approximate POI





5. On-scene police photograph showing dirt debris from the undercarriage of Vehicle #2 at POI and post impact trajectory



6. Close-up view of dirt debris from Vehicle #2 and radiator fluid spill from Vehicle #1



7. Reverse trajectory view of both vehicles at final rest positions (FRP)



8. Vehicle #1's FRP





9. Lateral (westerly) view of both vehicles at FRP showing the distance of separation between the rear bumper of Vehicle #2 and the front bumper of Vehicle #1 [1.0 m (3.3')]



10. Lateral (easterly) view of both vehicles at FRP, highlighting the radiator spill and right front tire steer angle of Vehicle #1



11. Look back view from the intersection



12. Look back view approximately 15 m (50') south of the FRP

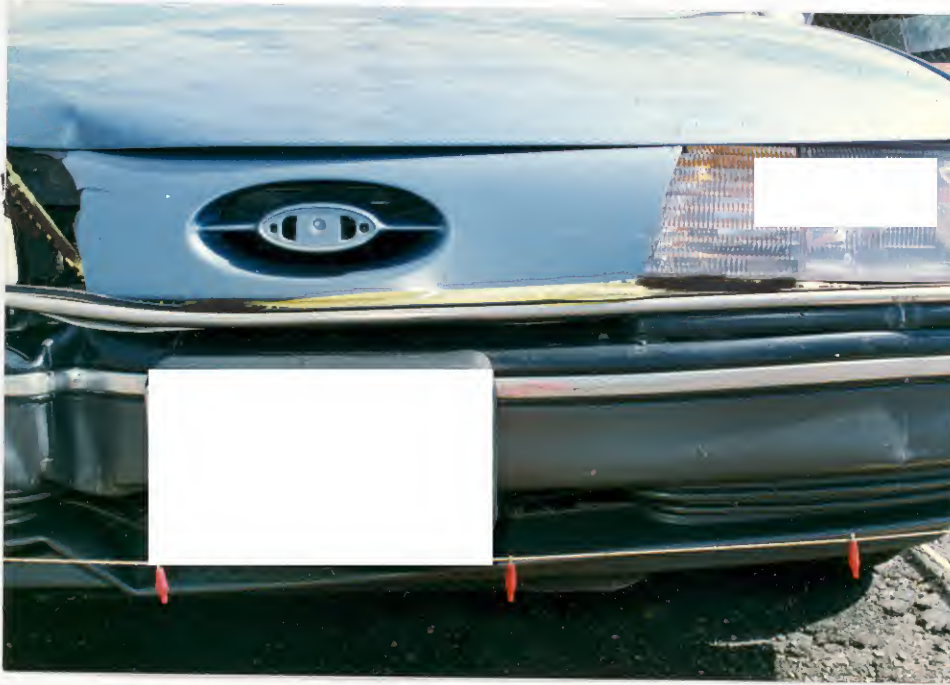




13. Frontal view of the 1990 Taurus GL (Vehicle #1)



14. Close-up view of the front right section of Vehicle #1, highlighting the damage pattern on the bumper and grille panel consistent with the vertical design of Vehicle #2's right rear taillight



15. Close-up view of the front center section of Vehicle #1, highlighting damage along a mid line on the license plate which aligned with contact on Vehicle #2's rear bumper rub strip



16. Close-up view of the front left section of Vehicle #1, highlighting contact damage on the bumper surface consistent in shape with the vertical right rear taillight assembly of Vehicle #2





17. Right front bumper energy absorption device (EAD) of Vehicle #1 showing 0.3 cm (0.1") of compression with full restitution



18. Left front bumper EAD showing 4.8 cm (1.9") of compression with full restitution



19. Overhead view showing longitudinal bumper displacement

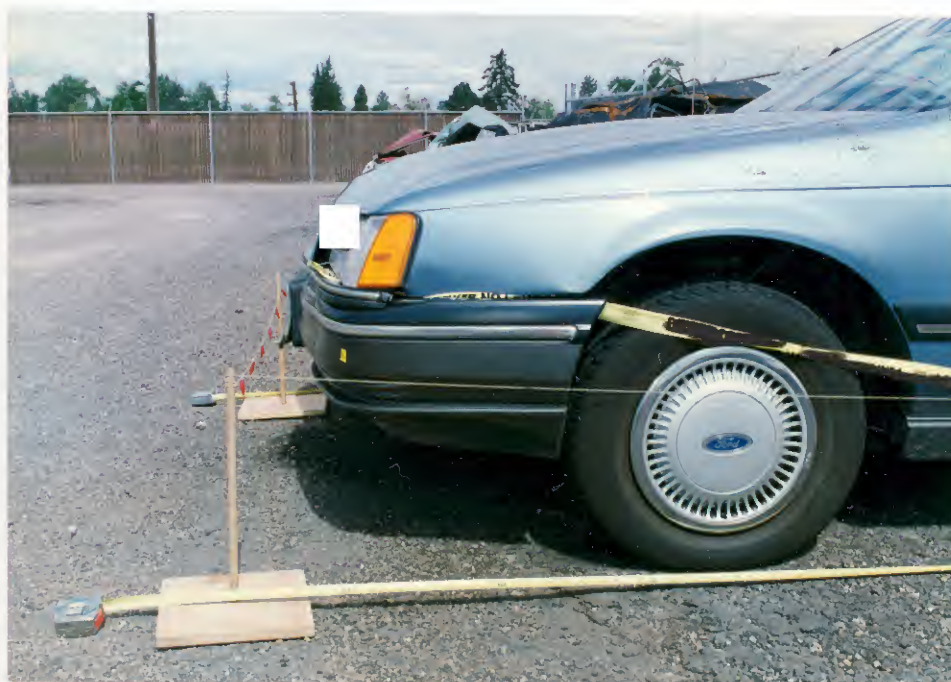


20. Reverse overhead view of bumper displacement





21. Left front corner view



22. Perpendicular view of the left front fender



23. Overall view of the left side plane



24. Left rear corner view





25. Right rear corner view showing broken taillight lens assembly (damage not related to crash)



26. Right front corner view



27. Perpendicular view of the right front fender



28. Lateral overhead view of the right front air bag crash sensor





29. View of the right front crash sensor looking up from underneath the vehicle and oriented with the front bumper along the bottom of the photograph



30. View of the left front crash sensor looking at the right side sensor with the front bumper located along the right side of the photograph



31. View of the engine compartment



32. Overhead view of the radiator mounted air bag crash sensor





33. Angular view of instrument panel from the driver's side of Vehicle #1



34. Perpendicular view of right front door panel from the driver's side, illustrating the forward position of the driver's seat relative to the right front passenger's seat



35. Close-up view of contact on the driver side head restraint



36. Close-up view of contact on the left front corner of the courtesy light bracket





37. Close-up view of the driver side manual restraint latch plate



38. Vertical view of the left  
instrument panel and air bag



39. View of the upper steering wheel rim and upper flap of the air bag module



40. Close-up view of a red transfer mark on the upper steering wheel rim





41. Close-up view of the upper flap of the air bag module cover, highlighting abrasions and skin transfers on the flap surface



42. Overall view of the air bag showing blood stains



43. Angular view of the air bag and contact along the lower instrument panel



44. View of the driver side and instrument panel side of the air bag along the top peripheral seam line





45. View of the air bag and upper flap of the air bag module cover with a red transfer (lipstick) mark on the air bag located on the instrument panel side of the peripheral seam line



46. Close-up of the red transfer mark on the air bag



47. Left side air bag vent port with generant residue on cruise control buttons



48. Right side air bag vent port with generant on cruise control buttons





49. View of the lower flap of the air bag module cover and lower steering wheel rim



50. Skin and oil transfer on the knee bolster and light switch panel from driver contact



51. Smudges on the knee bolster from driver contact

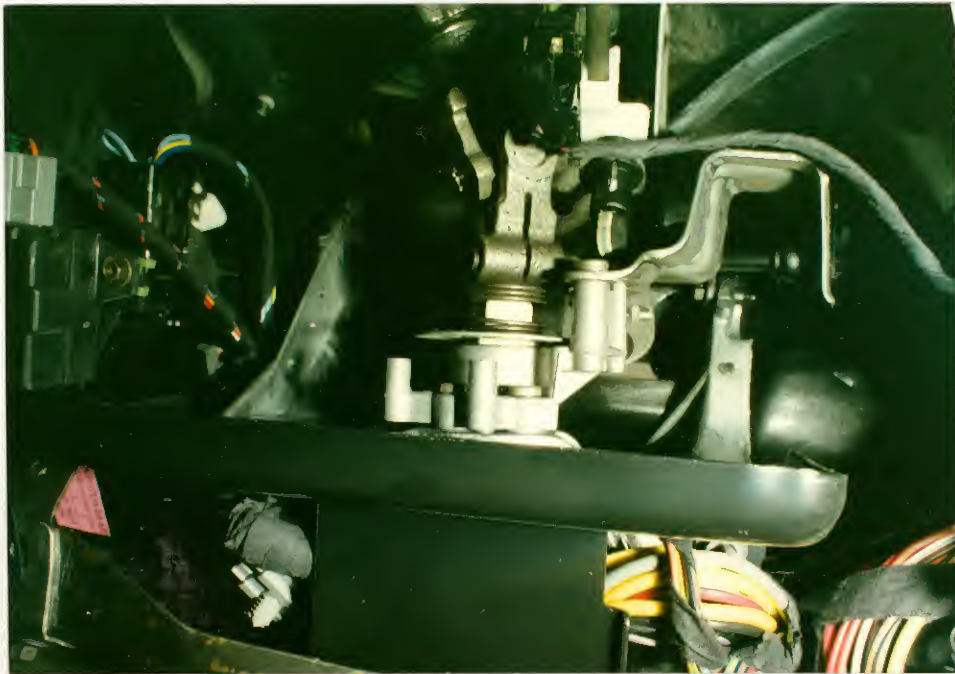


52. View showing the displacement of the left shear capsule





53. View showing the displacement of the right shear capsule



54. View of the steering column universal joint with the engine oriented along the top of the photograph



55. Vertical view of the center instrument panel and contact evidence on the head liner



56. Close-up of the driver contact on the head liner





57. Vertical view of the center instrument panel highlighting driver contact along the upper edge of the instrument panel



58. Close-up view of driver contact along the upper edge of the instrument panel showing an indentation of the vinyl surface



59. Vertical view of the right front instrument panel



60. Angular view of the instrument panel from the right front passenger side showing driver contact points and relative positions of the front seats





61. Perpendicular view of the left front door panel



62. View of the rear seat area from the left side



63. View of the rear seat area from the right side



64. Close-up view of the driver's gemstone necklace





65. Frontal view of the Cadillac Coupe deVille (Vehicle #2)



66. Left front corner view of Vehicle #2



67. Left side plane



68. Perpendicular view of the left rear fender and rear bumper





69. Overhead view from the left side of the rear plane illustrating bumper displacement



70. View of the rear plane



71. Close-up view of the right bumper area showing contact evidence along the rub strip produced by the license plate of Vehicle #1 (highlighted by the yellow calibrated tape)



72. Overhead view from the right side of the rear plane showing bumper displacement

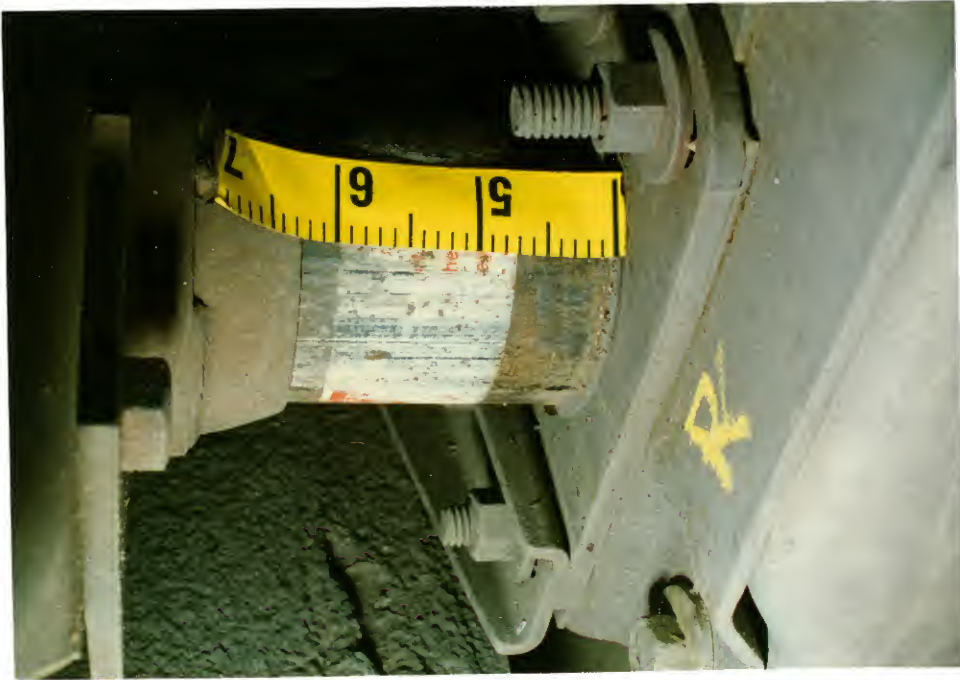




73. Right rear corner view



74. Perpendicular view of the right rear fender and rear bumper



75. Right rear bumper EAD



76. View of Vehicle #2's front seat and right front door area





77. View of the driver side manual 3-point lap and shoulder belt



78. View of the front seat and left front door area



79. Angular view of the instrument panel



80. View of the rear seating area

# **“GRAPHIC” PHOTOGRAPHS AND IMAGES**

The following “GRAPHIC” Photographs and Images have been removed from this case.

Photo # 81-83 ; SLIDE # 67-69

If you would like a copy of these photographs and/or images please write to:

MARJORIE SACCOCCIO  
VOLPE NATIONAL TRANSPORTATION SYSTEMS CENTER  
55 BROADWAY  
CAMBRIDGE, MA 02142

In the body of your request please include the case, photograph and image number(s).



## SLIDE INDEX

<u>Slide No(s).</u>	<u>Description</u>
1.	Crash scene schematic
2.	Manikin of the Ford Taurus driver illustrating soft tissue injuries
3.	Manikin of the Ford Taurus driver illustrating skeletal injuries
4.	Manikin of the Ford Taurus driver illustrating internal organ injuries
5.	Trajectory of the 1990 Ford Taurus GL (Vehicle #1) approximately 45 m (150') prior to point of impact (POI) with the Cadillac deVille (Vehicle #2)
6.	Trajectory of Vehicle #1 approximately 30 m (100') prior to the POI
7.	Trajectory of Vehicle #1 approximately 15 m (50') prior to the POI
8.	Approximate POI
9.	Approximate final rest of both vehicles
10.	Look back view from the intersection
11.	Look back view approximately 15 m (50') south of the FRP
12-13.	Frontal view of the 1990 Taurus GL (Vehicle #1)
14.	Close-up view of the front right section of Vehicle #1, highlighting the damage pattern on the bumper and grille panel consistent with the vertical design of Vehicle #2's right rear taillight assembly
15.	Close-up view of the front center section of Vehicle #1, highlighting damage along a mid line on the license plate consistent with contact on Vehicle #2's rear bumper rub strip
16.	Close-up view of the front left section of Vehicle #1, highlighting contact damage on the bumper surface consistent in shape with the vertical right rear taillight assembly of Vehicle #2
17.	Right front bumper energy absorption device (EAD) of Vehicle #1 showing 0.3 cm (0.1") of compression with full restitution
18.	Left front bumper EAD showing 4.8 cm (1.9") of compression with full restitution



19. Overhead view showing longitudinal bumper displacement
20. Perpendicular view of the left front fender
21. View of the left front air bag crash sensor
22. Overall view of the left side plane
23. Left rear corner view
24. Right rear corner view showing broken taillight lens assembly (damage not related to crash)
25. Perpendicular view of the right front fender
26. Right front corner view
- 27-28. Lateral overhead view of the right front air bag crash sensor
29. View of the engine compartment
30. Overhead view of the radiator mounted air bag crash sensor
31. Angular view of instrument panel from the driver's side of Vehicle #1
32. Skin and oil transfer on the knee bolster and light switch panel from driver contact
33. Perpendicular view of right front door panel from the driver's side, illustrating the forward position of the driver's seat relative to the right front passenger's seat
34. View of contact on the driver side head restraint
35. Vertical view of the left instrument panel and air bag
36. View of the upper flap of the air bag module and air bag
37. Close-up view of a red transfer mark on the upper steering wheel rim
38. Close-up view of the upper flap of the air bag module cover highlighting abrasions and skin transfers on the flap surface
39. View of the air bag showing blood stains
40. Close-up view of a red transfer (lipstick) mark on the air bag located along the top peripheral seam line on the instrument panel side of the air bag

- 41-42. Smudges on the knee bolster from driver contact
- 43. View of the left shear capsule displacement
- 44. View of the right shear capsule displacement
- 45. View of the steering column universal joint with the engine oriented along the left side of the slide
- 46. View of driver contact evidence (skin transfer) on the head liner
- 47. Close-up of the driver contact on the head liner
- 48. Close-up view of contact on the left front corner of the courtesy light bracket
- 49. Vertical view of the center instrument panel highlighting driver contact along the upper edge of the instrument panel
- 50. Close-up view of driver contact along the upper edge of the instrument panel showing an indentation of the vinyl surface
- 51. Vertical view of the right front instrument panel
- 52. View of the rear seat area from the left side
- 53. Close-up view of the driver's gemstone necklace
- 54. Frontal view of the Cadillac Coupe deVille (Vehicle #2)
- 55.. Left front corner view of Vehicle #2
- 56. Perpendicular view of the left rear fender and rear bumper
- 57. View of the rear plane of rear plane
- 58. Close-up view of the right bumper area showing contact evidence along the rub strip produced by the license plate of Vehicle #1 (highlighted by the yellow calibrated tape)
- 59. Overhead view from the right side of the rear plane showing bumper displacement
- 60. Right rear bumper EAD with 5.7 cm (2.25") stroke
- 61. Left rear bumper EAD with 5.3 cm (2.1") stroke
- 62. View of the right side plane

- 63. Right front corner view
- 64. View of Vehicle #2's front seat and right front door area
- 65. Angular view of the instrument panel
- 66. View of the front seat and left front door area
- 67. Autopsy slide of the driver in the Ford Taurus GL showing punctate abrasions and contusions resulting from the interaction with the air bag module cover and air bag. The red line running horizontally left to right just below the breast line and above the calibrated scale was consistent with the dimensions and shape of the air bag module flaps along the horizontal parting seam.
- 68. Same overhead view of the driver with the calibrated scale located over the right shoulder and right breast
- 69. View of the driver's left head, face, neck, and shoulder areas noting the distinctive punctate wounds on the neck and face













CA9309 #5





CA9309 #6



CA 9309 #7



CA 9309 #8



CA9309 #9





CA9309 #10



CA9309 #11



CA 9309 #12  
Best Available



**CA9309 #13**  
**Best Available**



CA9309 #14  
Best Available

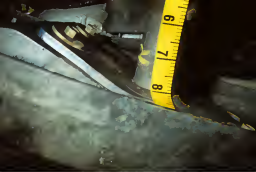




CA 9309 #15



CA 9309 #16  
Best Available



CA 9309 #17  
Best Available



CA9309 #18  
Best Available



**CA9309 #19**  
**Best Available**





**CA9309 #20**  
**Best Available**



CA9309 #21



CA 9309 #22  
Best Available



**CA9309 #23**  
**Best Available**



**CA9309 #24**  
**Best Available**



CA 9309 #25  
Best Available





CA 9309 #26  
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CA9309 #27



CA 9309 #28



CA9309 #29



CA 9309 #30



CA 9309 #31  
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CA9309 #42



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CA9309 #45



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CA9309 #51



CA9309 #52



CA9309 #53





CA9309 #54  
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**CA 9309 #55**  
**Best Available**



CA9309 #56  
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CA9309 #58  
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CA9309 #59  
Best Available





CA 9309 #60  
Best Available



CA 9309 #81  
Best Available



CA 9309 #82  
Best Available



CA 9309 #63  
Best Available



CA 9309 #64



CA9309 #65





CA 9309 #66

**"GRAPHIC"**  
**PHOTOGRAPHS and IMAGES**

**Several vivid photographs have been removed for this case.  
These photographs contain highly graphic material  
which may be improper for the general audience.**

**Slides #67-69**

---

**If you would like a copy of these photographs and/or images  
please call or write to:**

**Marjorie Saccoccio at (617) 494-2640  
VOLPE NATIONAL TRANSPORTATION SYSTEMS CENTER  
55 Broadway  
Cambridge, MA 02142**

## **APPENDIX A**

### **Police Accident Report**

# TRAFFIC ACCIDENT REPORT

DR-44 (1/90)				CITY SERIAL NUMBER				STATE																																																										
ROAD CODE				DATE OF ACCIDENT				TIME																																																										
DATE OF ACCIDENT				TIME				DAY OF WEEK																																																										
DATE OF NOTIFICATION				TIME				INVESTIGATED AT SCENE																																																										
DATE OF REPORT				LOCATION: ROUTE, STREET, ROAD				MILES 138 FEET N X S E W																																																										
NUMBER KILLED				NUMBER INJURED				AT THE INTERSECTION WITH																																																										
PUBLIC PROPERTY				TOTAL VEHICLES				PHOTO TAKEN																																																										
PUBLIC EMPLOYEE				DISTRICT NUMBER				RAILROAD CROSSING																																																										
CONST. ZONE				GAME				PRIVATE PROPERTY																																																										
INCOMPLETE REPORT																																																																		
VEH #1 OR X				PARKED				UNATTENDED																																																										
PEDESTRIAN #				VEH #2 OR 2				PARKED																																																										
UNATTENDED				PEDESTRIAN #				UNATTENDED																																																										
LAST NAME				FIRST				MI																																																										
ADDRESS				CITY				STATE																																																										
ZIP CODE				BUS PHONE				DATE OF BIRTH																																																										
VIOLATION(S)				CITATION NUMBER(S)				COMMON CODE(S)																																																										
CARELESS DRIVING				NOT ISSUED				141																																																										
VIOLATION CODE(S)				CITATION NUMBER(S)				COMMON CODE(S)																																																										
42-4-1204				NOT ISSUED				141																																																										
YEAR				MAKE				MODEL																																																										
90				Ford				Taurus																																																										
LIC. PLATE NO.				STATE				BODY TYPE																																																										
								4 Door																																																										
COLOR				Blue																																																														
VEH OWNER LAST NAME				FIRST				MI																																																										
Driver #1																																																																		
ADDRESS				CITY				STATE																																																										
ZIP CODE				VEH OWNER LAST NAME				FIRST																																																										
				Driver #2																																																														
ADDRESS				CITY				STATE																																																										
ZIP CODE				DAMAGE SEVERITY:				DAMAGE SEVERITY:																																																										
				1-SLIGHT				1-SLIGHT																																																										
				2-MODERATE				2-MODERATE																																																										
				3-EXTREME				3-EXTREME																																																										
20 Undercarriage				20 Undercarriage				20 Undercarriage																																																										
VEH #1 TOWED BY/TO				VEH # TOWED BY/TO				N/A																																																										
OWNER OF DAMAGED PROP				LAST NAME				FIRST																																																										
ADDRESS				CITY				STATE																																																										
ZIP CODE																																																																		
DESCRIBE ACCIDENT																																																																		
Vehicle #1 was traveling Southbound in the at an unknown rate of speed struck the rear of Vehicle #2 who was also Southbound on stopped in traffic. Vehicle #2 was pushed forward 14 feet from point of impact. The driver of Vehicle #1 was struck in the facial area by the Air Bag on her Vehicle, causing the fatal injury, no seat belt was worn at time of accident.																																																																		
Driver of Veh #2 stated that he was sitting at the light, saw Veh #1 approaching from the rear and slam into him. He further stated that she never attempted to stop.																																																																		
INDICATE NORTH BY ARROW																																																																		
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>VEH (1)</th> <th>Pos (2)</th> <th>Res (3)</th> <th>Ejct (4)</th> <th>Ini Sev (5)</th> <th>Phy Inj (6)</th> <th>Stat (7)</th> <th>Trp Rpt (8)</th> <th>Age (9)</th> <th>Sex (10)</th> <th>Name-Jdd (11)</th> </tr> <tr> <td>1</td> <td>1</td> <td>2</td> <td>2</td> <td>5</td> <td>4</td> <td>2</td> <td>926</td> <td>71</td> <td>F</td> <td></td> </tr> <tr> <td>2</td> <td>1</td> <td>2</td> <td>2</td> <td>2</td> <td>4</td> <td>1</td> <td>927</td> <td>34</td> <td>M</td> <td></td> </tr> <tr> <td>2</td> <td>3</td> <td>1</td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td>10</td> <td>M</td> <td></td> </tr> <tr> <td>2</td> <td>6</td> <td>1</td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td>13</td> <td>F</td> <td></td> </tr> </table>												VEH (1)	Pos (2)	Res (3)	Ejct (4)	Ini Sev (5)	Phy Inj (6)	Stat (7)	Trp Rpt (8)	Age (9)	Sex (10)	Name-Jdd (11)	1	1	2	2	5	4	2	926	71	F		2	1	2	2	2	4	1	927	34	M		2	3	1		1				10	M		2	6	1		1				13	F	
VEH (1)	Pos (2)	Res (3)	Ejct (4)	Ini Sev (5)	Phy Inj (6)	Stat (7)	Trp Rpt (8)	Age (9)	Sex (10)	Name-Jdd (11)																																																								
1	1	2	2	5	4	2	926	71	F																																																									
2	1	2	2	2	4	1	927	34	M																																																									
2	3	1		1				10	M																																																									
2	6	1		1				13	F																																																									

# STATE OF ACCIDENT REPORT OVERLAY

BEST AVAILABLE COPY

DMVTA (1/81)

ACCIDENT CLASSIFICATION		VEHICLE CLASSIFICATION	
<b>A. BY LOCATION</b> 1 On-Roadway Accident      3 Ran Off Right Side 2 Ran Off Left Side      4 Ran off "T" Intersection		<b>K. BY VEHICLE TYPE</b> 1 Passenger Car      8 School Bus 2 Car With Trailer      9 Non-School Bus 3 Pickup Truck      10 Motorcycle 4 Truck, Self-Contained      11 Bicycle 5 Truck, Tractor/Tanker      12 Motorized Bicycle 6 Truck, Tractor/Semi-Trailer      13 Farm Equipment 7 Self-Propelled Motorhome      14 Other	
<b>B. BY FIRST HARMFUL EVENT</b> <b>ROD-COLLISION ACCIDENT</b> 1 Overturning Accident 2 Other Non-Collision Accident <b>COLLISION ACCIDENT INVOLVING PEDESTRIAN</b> 3 School Age To/From School 4 All Others <b>INVOLVING MTR VEH IN TRANSPORT</b> 5 Broadside 6 Head-On 7 Rear-End 8 Side-Swipe-Same Direction 9 Side-Swipe-Opposite Direction 10 Approach Turn 11 Overtaking Turn 12 Parked Motor Vehicle 13 Railway Vehicle 14 Bicycle 15 Motorized Bicycle <b>INVOLVING ANIMAL</b> 16 Domestic 17 Wild		<b>L. BY DIRECTION OF TRAVEL</b> 1 North      5 South 2 Northeast      6 Southwest 3 East      7 West 4 Southeast      8 Northwest	
<b>C. BY DAMAGE SEVERITY</b> 1 Striking Damage Accident 2 Functional Damage Accident 3 Other Mtr Veh Damage Accident 4 Other Prop Damage Accident 5 No Damage Accident		<b>M. BY VEHICLE MOVEMENT</b> 1 Going Straight      6 Turning On Red Light 2 Backing      7 Double Turn To Left 3 Turning Left      8 Double Turn To Right 4 Turning Right      9 Stopped in Traffic 5 Wrong Way	
<b>D. BY ROAD DESCRIPTION AT ACCIDENT LOCATION</b> 1 At Intersection      4 In Mid-Block (City) 2 At Driveaway Access      5 In Alley 3 Intersection Related      6 Non-Intersection (Rural)		<b>N. BY VEHICLE DEFECT</b> 1 No Apparent Defects      3 Tires Defective 2 Brakes Defective      4 Other Defects	
<b>E. BY ROAD CONTOUR</b> 1 Straight, On-Level      4 Curve, On-Grade 2 Straight, On-Grade      5 Hillcrest 3 Curve, On-Level		<b>P. BY FIRE INVOLVEMENT</b> 1 No Fire Involvement      2 Vehicle Caught on Fire	
<b>F. BY ROAD SURFACE</b> 1 Paved      2 Unpaved		<b>Q. BY SPEED DATA</b> Enter Speed Limit/Estimated Driving Speed	
<b>G. BY ROAD CONDITION</b> 1 Dry      4 Snowy 2 Wet      5 Icy 3 Muddy      6 Slushy		<b>DRIVER/PEDESTRIAN CLASSIFICATION</b> <b>R. BY DRIVER ACTION</b> 1 No Improper Driving      10 Following Too Closely 2 Exceed Lawful Speed Limit      11 Inattentive Driving 3 Exceed Safe Speed for Conditions      12 Signaling Violation 4 Fail Yield ROW At Intersection      13 Disregard Traffic Control Device 5 Fail Yield to Pedestrian      14 Parking Violation 6 Imp Left Turn in Front of Traffic      15 Spilled Load on Road 7 Changing Lanes (Weaving)      16 Improper Backing 8 Improper Passing      17 Other Improper Action 9 Wrong Side/Not Passing	
<b>H. BY LIGHTING CONDITION AT ACCIDENT LOCATION</b> 1 Daylight      2 Dark, Lighted 3 Dawn or Dusk      4 Dark, Unlighted		<b>S. BY PEDESTRIAN ACTION</b> 1 Cross Against Signal      7 Walk in Ribby With Traffic 2 Cross/Enter At Intersection      8 Walk in Ribby Against Traffic 3 Cross/Enter Not At Intersection      9 Getting In/Out Vehicle 4 Standing in Roadway      10 Push/Work On Vehicle 5 Playing in Roadway      11 Other Action 6 Soliciting Rides	
<b>I. BY ADVERSE WEATHER CONDITION</b> 1 None      4 Fog 2 Rain      5 Dust 3 Snow/Sleet/Hail      6 Wind		<b>T. BY CONDITION OF DRIVER/PEDESTRIAN</b> 1 DUI/DWI      4 Unknown If Drinking 2 Had Been Drinking      5 Asleep At Wheel 3 Had Not Been Drinking      6 Physical Defects	
<b>J. WHICH VEHICLE OCCUPIED</b> Vehicle 1      Pedestrian 2      B-Bicycle      C-Other		<b>U. BY CRASH HELMET (IF APPLICABLE)</b> 1 Yes      2 No	
<b>K. POSITION IN/ON VEHICLE</b> 1-Other      2-Passenger      3-Riding/Hanging On Outside		<b>V. BY EYE PROTECTION (IF APPLICABLE)</b> 1 Yes      2 No	
<b>L. RESTRAINT USED</b> 1-Yes      2-No		<b>W. BY WITNESSED VICTIM STATUS</b> 1-Conscious      2-Unconscious	
<b>M. OCCUPANT EJECTED</b> 1-Yes      2-No		<b>X. AMBULANCE TRIP REPORT</b>	
<b>N. INJURY SEVERITY</b> 1-No Injury      4-Evident, Inappreciating 2-Possible Injury      5-Fatal 3-Evident, Non-Inappreciating		<b>Y. AGE</b> (10) SEX	
<b>O. PHYSICAL INJURY</b> 1-Head      2-Chest      3-Abdomen      4-Skeletal		<b>Z. NAME AND ADDRESS</b>	

NOT DRAWN TO  
SCALE BY:

POI: 12'E of W  
138 N of S  
POR: 12 E of W  
#2 124 N of S  
POR: 12 E of W  
#1 121 N of S



N

11'6

10'9

9'6

10'

18'10

PARKING AREA, NOT PART OF ROADWAY



## OFFENSE REPORT • POLICE DEPARTMENT BEST AVAILABLE COPY

Page ONE of TWO Pages

- ☐ CITY PROPERTY/PERSONNEL INVOLVED  
☐ LIQUOR LICENSE ESTABLISHMENT INVOLVED  
☐ COUNTER REPORT ☐ TELEPHONE REPORT

☒ ORIGINAL REPORT  
☐ ADDITIONAL

OFFENSE REPT. NO. [REDACTED]

OFFENSE	TYPE OF OFFENSE Known Dead ( Auto Accident, Fatal #24)				OFFENSE OCCURRED BETWEEN	DATE	24 HR TIME	DAY	DATE	24 HR TIME	DAY
	LOCATION OF OFFENSE				APT. NO.	PRECINCT	TYPE OF PREMISES Street		WEAPON/TOOL USED		
VICTIM	NAME (LAST, FIRST, MIDDLE OR COMPANY)				DOB	RACE	SEX	HGT	WGT	SOCIAL SECURITY NO.	
	RESIDENCE ADDRESS				CITY	COUNTY	STATE	ZIP CODE	HOME PHONE		
	BUSINESS ADDRESS				CITY	COUNTY	STATE	ZIP CODE	BUS. PHONE		
	# OF VICT.	NATURE OF INJURY/OTHER VICTIM(S)				HOSPITAL/PHYSICIAN		AMB #	ORDERED TO APPEAR ON	WRITTEN STATEMENT MADE	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
REPT. BY	NAME <input type="checkbox"/> VICTIM <input type="checkbox"/> OFFICER <input type="checkbox"/> OTHER				DOB	RACE	SEX	REL. TO VICTIM	SOCIAL SECURITY NO.		
	RESIDENCE ADDRESS				CITY	COUNTY	STATE	ZIP CODE	HOME PHONE		
	BUSINESS ADDRESS				CITY, STATE	BUSINESS PHONE		ORDERED TO APPEAR ON	WRITTEN STATEMENT MADE	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
	0 WAS THERE A WITNESS TO THE CRIME? IF YES, PLACE AN X IN THE BOX AT LEFT.										
WITNESS/ADDITIONAL VICTIM	NAME <input type="checkbox"/> VICTIM <input type="checkbox"/> OFFICER <input type="checkbox"/> OTHER				DOB	RACE	SEX	REL. TO VICTIM	SOCIAL SECURITY NO.		
	RESIDENCE ADDRESS				CITY	COUNTY	STATE	ZIP CODE	HOME PHONE		
	BUSINESS ADDRESS				CITY, STATE	BUSINESS PHONE		ORDERED TO APPEAR ON	WRITTEN STATEMENT MADE	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
	0 CAN A SUSPECT BE NAMED? IF YES, PLACE AN X IN THE BOX AT LEFT.										
	NAME <input type="checkbox"/> VICTIM <input type="checkbox"/> OFFICER <input type="checkbox"/> OTHER				DOB	RACE	SEX	REL. TO VICTIM	SOCIAL SECURITY NO.		
	RESIDENCE ADDRESS				CITY	COUNTY	STATE	ZIP CODE	HOME PHONE		
	BUSINESS ADDRESS				CITY, STATE	BUSINESS PHONE		ORDERED TO APPEAR ON	WRITTEN STATEMENT MADE	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
	0 CAN A SUSPECT BE LOCATED? IF YES, PLACE AN X IN THE BOX AT LEFT.										
LOC	NAME/ALIAS				<input type="checkbox"/> ARRESTED <input type="checkbox"/> ORDERED-IN <input type="checkbox"/> AT LARGE	NAME/ALIAS				<input type="checkbox"/> ARRESTED <input type="checkbox"/> ORDERED-IN <input type="checkbox"/> AT LARGE	
	0 CAN A SUSPECT BE DESCRIBED? IF YES, PLACE AN X IN THE BOX AT LEFT.										
	DOB/AGE				RACE	SEX	HGT	WGT	EYES	HAIR COLOR/STYLE	
	CLOTHING, FACIAL HAIR, UNUSUAL FEATURES, SPEECH, GLASSES, ETC.				CLOTHING, FACIAL HAIR, UNUSUAL FEATURES, SPEECH, GLASSES, ETC.						
SUSPECT	0 CAN A SUSPECT VEHICLE BE IDENTIFIED? IF YES, PLACE AN X IN THE BOX AT LEFT.										
	YEAR	MAKE	MODEL	STYLE	YEAR	MAKE	MODEL	STYLE	COLOR - TOP	BOTTOM	
	COLOR - TOP	BOTTOM	LIC. NO.	STATE	IDENTIFYING CHARACTERISTICS	LIC. NO.	YEAR	STATE	TYPE	DATE/TIME ATR NOTIFIED	HRS
	CON'T	IDENTIFYING CHARACTERISTICS				LIEN HOLDER <input type="checkbox"/> INSURED					
ADMIN	OFFICER TAKING REPORT/SER. NO.				DATE OF REPT.		I affirm this information is true and correct.				
	INVESTIGATOR ASSIGNED				TIME REPT. INITIATED		SIGNED				



## OFFENSE REPORT • [REDACTED] POLICE DEPARTMENT

Page TWO of TWO Pages☐ ORIGINAL REPORT  
☐ ADDITIONAL REPORTPOINT OF ENTRY/WHERE ATTACKED  
MOTOR VEHICLE ACCIDENT  
METHOD OF ENTRY/ATTACK  
—

OFFENSE REPT. NO. [REDACTED]

☐ IS THERE A SIGNIFICANT M. O. A. IF YES, PLACE AN X IN THE BOX AT LEFT AND DESCRIBE IN NARRATIVE.☐ IS THERE SIGNIFICANT PHYSICAL EVIDENCE PRESENT? IF YES, PLACE AN X IN THE BOX AT LEFT AND DESCRIBE IN NARRATIVE.

BRIEFLY DESCRIBE EVIDENCE

PROP. SECT. INVOICE NO.

CRIME LAB CAR #

☐ IS STOLEN PROPERTY TRACEABLE? IF YES, PLACE AN X IN THE BOX AT LEFT.

#	QTY.	ARTICLE TYPE AND BRAND NAME	MODEL (#)	COLOR	SERIAL NUMBER	EST. VALUE
---	------	-----------------------------	-----------	-------	---------------	------------

Investigation disclosed that victim was driving a motor vehicle southbound in the [REDACTED] at an unknown rate of speed, striking the rear of a vehicle being driven by witness #1 [REDACTED]. The Air Bag in Victim's Vehicle was activated and knocked the victim unconscious.

Victim was transported to [REDACTED] Hospital and pronounced Dead at [REDACTED] hours by [REDACTED]. Initial cause of death was listed as multiple trauma and broken neck.

LIST LOST/STOLEN/DAMAGED PROPERTY, THEN BEGIN NARRATIVE

\$	U O R	VALUE OF	VEHICLE	CURRENCY	JEWELRY	FURS	CLOTHING	MISC.	TOTAL VALUE
MISC.	BELONGS TO OPERATION I.D.?		<input type="checkbox"/> YES <input type="checkbox"/> NO	ID NUMBER	79		ADBOLT IN USE? <input type="checkbox"/> YES <input type="checkbox"/> NO ADBOLT DEFEATED? <input type="checkbox"/> YES <input type="checkbox"/> NO		FOR DATA USE ONLY DATA ENTRY CLERK INIT.

**POLICE DEPARTMENT  
SUPPLEMENTARY REPORT • TRAFFIC DIVISION**

Case Number [REDACTED]

Page ONE of FOUR☐ Additional

Last Name		First		Middle	
Address				Res. Phone	
City		State		Zip	
Bus. Phone					
Driver's License Number		State		Sex	
DOB		Age		71	
Violations				Careless Driving	
Violation Code		Citation Number		Common Code	
NONE ISSUED					
Year		Make		Model	
90		Ford		Taurus	
License Number		State		Body Type	
Co		4 Door		Color	
Blue					
Registered Owner Name					
Address					
City		State		Zip Code	

Location of Accident	
Date of Accident	Date of Report
93	93
Subject	
FATAL ACCIDENT	
Case Status	Date
EXCEPTIONALLY CLEAR	93
Photo Number	Fatal Number
Insurance Company	
Policy Number	
Expiration Date	
Vehicle Towed By/To:	
Vehicle Identification No.	

Date, Time &  
Serial No.

CALL RECEIVED ON FATAL ACCIDENT

Dispatch called this office requesting [REDACTED] response to the [REDACTED] on a fatal automobile accident. I responded to the scene, contacting [REDACTED] while in route. [REDACTED] was at the scene, supervising the [REDACTED] Officers. He told me that he had also requested Homicide and [REDACTED] to respond to the scene, stating that the paramedics had told him there appeared to be a gun shot wound in the victims head.

FIRST OBSERVATION OF SCENE UPON ARRIVAL

Upon arrival I observed the following:  
[REDACTED] Officers had North and South Bound traffic diverted at [REDACTED] and [REDACTED] allowing no through traffic in the [REDACTED]. There was a blue Ford Taurus in Lane #2, Facing Southbound with moderate front end damage. Directly in front of the Taurus was an older white Cadillac with very minor damage to the rear bumper. There was dirt and debris from the accident to the rear of the Taurus. Officers were taking statement from several parties in the area of the vehicles. Inside the Taurus were two small dogs, sitting in the back seating area. The streets were dry with no adverse weather or road conditions.

SCENE INVESTIGATION ; Measurements & Photographs

All scene measurements taken with a 100' cloth tape. Photographs taken with 35mm camera using Kodak 100 speed film. The Curblines used for these measurements were the West Curb on the [REDACTED] and the North Curblines on the East side of [REDACTED]. All photographs were taken with natural lighting.

Officer	Serial No.	Detective Assigned	Serial No.
Completed By	Serial No.	Reviewing Officer	Serial No.

DPD 320 (2/91)

REVAER OFFICE DEPT

Date, Time &  
Serial No.

BEST AVAILABLE COPY

CONT.

POI : 154'6" NORTH of North Curbline  
12'0" East of West Curbline

POR : 124'0" North of North Curbline      POR : 112'0" North of North Curbline  
#1      11'0" East of West Curbline      #2      10'2" East of West Curbline

POINT OF REST MEASURED TO RIGHT REAR WHEEL ( VEH # 2 )

POINT OF REST MEASURED TO LEFT FRONT WHEEL ( VEH # 1 )

STREET AND LANE WIDTHS:

As Measured From West Curbline to East Curbline;

Curb to lane #2 : 18'10", Lane #2 to Lane #1; 10'. Left Turn Lane at 9'6"  
to Lane #1 of Northbound; 10'9 then 11'6" to East Curb: TOTAL WIDTH 60'7".

PHOTOGRAPHS:

Several photographs of the scene, vehicles and interior of Vehicle #1 were  
taken at the scene. ( Photo #324)

EMERGENCY PERSONNEL AT SCENE:POLICE PERSONNEL:SCENE INVESTIGATION AND HOSPITAL FOLLOW UP:

of the responded to Hospital. and  
Myself and above listed officers were processing the accident scene. reported to me that the victim, had been pronounced DOA at Hospital by Dr. at 1438 Hours. She further informed me that X-Rays taken of revealed no gunshot wound to her body or head. The doctor stated that she received major blunt trauma to her chest and head, with a broken neck and unknown internal injuries which appeared to be post mortum. Upon receiving this information, the investigation was turned over to me. departed the scene without becoming involved with any part of the investigation. recovered the victims property and placed same in the

Detective Assigned

Serial No.

Reviewing Officer

Serial No.

Date, Time &  
Serial No.

CONT

There were two small dogs in the vehicle and Officers responded to the scene to place the dogs in the shelter. After the Measurements and photographs were taken the vehicle was towed to the by The vehicle was released at the scene. responded to Hospital and cited for No Proof Of Insurance, Citation

WITNESS STATEMENTS AND INTERVIEWS :

( Driver of Vehicel #2 ) : stated that he had been Southbound on in the right through lane, stopped behind two other vehicle at a Red Light for He stated that he was struck from the rear and felt two impacts, the first being more severe than the second. He was unable to give an estimate on the speed of the other car, however, he stated he did not hear any type of skids from breaking. He said that after the accident he went to the other car and observed a women slumped over the steering wheel and saw " Smoke or Something coming from the steering wheel". He was unsure if she had been wearing a Seat Belt.

Stated that he was driving Southbound on in lahe #1, saw the vehicle brake then hit the other car twice. He said that he was the second person to the vehicle and observed the seatbelt over left shoulder, unbuckeled. there was another man that arrived at the car first, however, he did not wait for police and no information other that the fact that he was driving an was available.

Was a passenger in vehilce. She stated that did not observe the initial impact but saw the vehicle roll into the other car on the second impact.

Stated that she was also Southbound on and saw the vehicle strike the other car twice. She also stated that she observed wearing a seatbelt.

: Was a pedestrian, didn't see the accident, however, he stated that was wearing a seat belt.

Stated that he assisted in the extrication of that she did have the Seat Belt looped over her left shoulder in the unbuckled position.

The officers at the scene made statement relating to their actions at the scene relating to taking statements and securing the scene.

I returned to the office and completed the Accident Report, and the Known Dead Offense Report, Case I also notified the State Patrol of the traffic fatality via telephone, fax and DOR Computer.

I responded to the Car Pound with of the Corner's Office per his request. While at the pound I took additional measurement of the vehicle with ( Measurements on Page 4 ).

Detective Assigned

Serial No.

Reviewing Officer

Serial No.

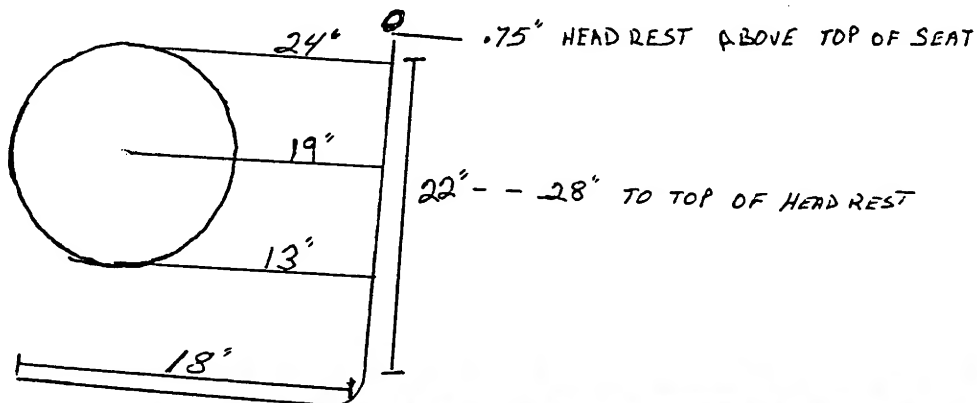
**POLICE DEPARTMENT  
SUPPLEMENTARY REPORT (Cont.) • TRAFFIC DIVISION**

Case Number [REDACTED]

Page FOUR of FOUR

Date, Time &  
Serial No. [REDACTED]

The below listed diagram depicts the the steering wheel and front drivers seat of the [REDACTED] Vehicle as measured at the pound. NOT TO SCALE.



I received a telephone call from [REDACTED]. He requested that the vehicle be held for investigation by his office. He further requested that the vehicle be secured from the elements. I obtained a tarp from the police garage and secured it to the [REDACTED] vehicle. [REDACTED] phoned the [REDACTED] stating that the Investigator assigned to this would be [REDACTED] of the [REDACTED]. He stated that [REDACTED] would be flying from [REDACTED] this date and respond to AIB on [REDACTED].

[REDACTED] responded to this office and was met by [REDACTED]. [REDACTED] escorted him to the Car Pound and informed the Sheriffs at the Pound that [REDACTED] could have unlimited access to the vehicle. Per [REDACTED] was at the Pound untill late evening conducting tests on the vehicle. ( A REPORT WAS REQUESTED FROM HIS INVESTIGATION ).

The [REDACTED] Vehicle was released, all charges excused to the [REDACTED].

I contacted [REDACTED] at the Coroners Office. [REDACTED] Stated that he would have the Autopsy Report completed by the end of this week and send a copy to be enclosed with this report.

**CONCLUSIONS OF CASE:** [REDACTED] was driving a motor vehicle Southbound in the [REDACTED] at an undetermined rate of speed striking a second vehicle which was also Southbound, stopped in traffic. The accident resulted in the Death of [REDACTED] ( See Corners Report ). The driver of the second vehicle, [REDACTED] received minor neck injuries and was treated at [REDACTED] Hospital. He was also cited for No Proof Of Insurance. This Case will be listed as EXCEPTIONALLY CLEARED, the party at fault in the accident expired as a result of the accident.

Detective Assigned

Serial No.

Reviewing Officer

Serial No.

BEST AVAILABLE COPY

## NARRATIVE

At [REDACTED] Hrs. Officers were dispatched to [REDACTED] on an auto accident. Ambulance #1 [REDACTED] arrived at the scene and related that the accident was a fatal. Car [REDACTED] was the first Police unit on the scene. Moments later car [REDACTED] and myself [REDACTED] arrived at the scene. At that point I directed that all southbound traffic on [REDACTED] be redirected. A traffic unit [REDACTED] was dispatched and arrived shortly. [REDACTED] was notified and [REDACTED] responded. I was approached by [REDACTED] paramedic who related that the victim appeared to have received a gunshot wound to the head. I requested that [REDACTED] and [REDACTED] respond to the scene. [REDACTED] responded to the scene. Ambulance #1 determined that they would transport victim [REDACTED] to [REDACTED] because they felt that life may still exist. [REDACTED] responded to [REDACTED] to follow up on the party. [REDACTED] related to officers that the wound was not caused by a gunshot. It appeared that when the victim's vehicle air bag inflated that it forced the victim back in her seat and broke her neck. The "wound" was caused by a bead from her necklace being forced into her causing a non-fatal wound. The scene was processed by [REDACTED] and all reports were completed. [REDACTED] was closed from [REDACTED] hrs to [REDACTED] hrs. for the investigation. Victim [REDACTED] had two small dog in the vehicle with her and they were sent to the animal sheter. The second victim in the other car [REDACTED] was transported to [REDACTED] Hospital by [REDACTED] ambulance. [REDACTED] injuries were not life threatening.

**APPENDIX B**  
**CRASH PC Output**



# SUMMARY OF CRASHPC RESULTS USING DAMAGE

---

## CRASH3 RECONSTRUCTION

	SPEED CHANGE (DAMAGE)	IMPACT SPEED (DAMAGE AND SPINOUT)
VEHICLE #1		
TOTAL	16 KPH ( 10 MPH)	32 KPH ( 20 MPH)
LONGITUDINAL	-16 KPH ( -10 MPH)	32 KPH ( 20 MPH)
LATITUDINAL	0 KPH ( 0 MPH)	0 KPH ( 0 MPH)
PDOF ANGLE	0 DEGREES	
ENERGY DISSIPATED =	13129 JOULES ( 9682 FT-LB)	
VEHICLE #2		
TOTAL	8 KPH ( 5 MPH)	9 KPH ( 5 MPH)
LONGITUDINAL	8 KPH ( 5 MPH)	9 KPH ( 5 MPH)
LATITUDINAL	0 KPH ( 0 MPH)	0 KPH ( 0 MPH)
PDOF ANGLE	-180 DEGREES	
ENERGY DISSIPATED =	8101 JOULES ( 5974 FT-LB)	

## SCENE INFORMATION

---

	VEHICLE #1	VEHICLE #2
IMPACT X-POSITION	-19.6 M. ( -64.3 FT.)	-14.3 M. ( -46.9 FT.)
IMPACT Y-POSITION	5.2 M. ( 17.1 FT.)	4.6 M. ( 15.1 FT.)
IMPACT HEADING ANGLE	0 DEGREES	0 DEGREES
REST X-POSITION	-9.1 M. ( -29.9 FT.)	-3.1 M. ( -10.2 FT.)
REST Y-POSITION	6.1 M. ( 20.0 FT.)	4.6 M. ( 15.1 FT.)
REST HEADING ANGLE	4 DEGREES	0 DEGREES
END-ROTATION X-POSITION	-19.6 M. ( -64.3 FT.)	-14.3 M. ( -46.9 FT.)
END-ROTATION Y-POSITION	5.2 M. ( 17.1 FT.)	4.6 M. ( 15.1 FT.)
END-ROTATION HEADING ANGLE	0 DEGREES	0 DEGREES
SIDE-SLIP ANGLE	0 DEGREES	0 DEGREES
DIRECTION OF ROTATION	NONE	NONE
AMOUNT OF ROTATION	<360	<360

COLLISION AND SEPARATION  
-----

	VEHICLE #1	VEHICLE #2
COLLISION		
IMPACT X-POSITION	-19.6 M. ( -64.3 FT.)	-14.3 M. ( -46.9 FT.)
IMPACT Y-POSITION	5.2 M. ( 17.1 FT.)	4.6 M. ( 15.1 FT.)
IMPACT HEADING ANGLE	0 DEGREES	0 DEGREES
SEPARATION (USING SPINOUT)		
US	17 KPH ( 10 MPH)	17 KPH ( 11 MPH)
VS	1 KPH ( 1 MPH)	0 KPH ( 0 MPH)
PSISD	0 DEG/SEC	0 DEG/SEC

DAMAGE DATA  
-----

	VEHICLE #1	VEHICLE #2
SIZE CATEGORY	3	6
STIFFNESS CATEGORY	3	6
VEHICLE WEIGHT	1400 KGS ( 3086 LBS)	2554 KGS ( 5631 LBS)
CDC	12FYEW1	06BZEW1
PDOF ANGLE	0 DEGREES *	180 DEGREES *
CRUSH LENGTH	154 CM. ( 61 IN.)	174 CM. ( 69 IN.)
C1	5 CM. ( 2 IN.)	0 CM. ( 0 IN.)
C2	4 CM. ( 2 IN.)	2 CM. ( 1 IN.)
C3	6 CM. ( 2 IN.)	4 CM. ( 2 IN.)
C4	9 CM. ( 4 IN.)	4 CM. ( 1 IN.)
C5	11 CM. ( 4 IN.)	4 CM. ( 2 IN.)
C6	0 CM. ( 0 IN.)	2 CM. ( 1 IN.)
D	-27 CM. ( -11 IN.)	43 CM. ( 17 IN.)
D'	-22 CM. ( -9 IN.)	54 CM. ( 21 IN.)

(\* INDICATES DEFAULT VALUE)

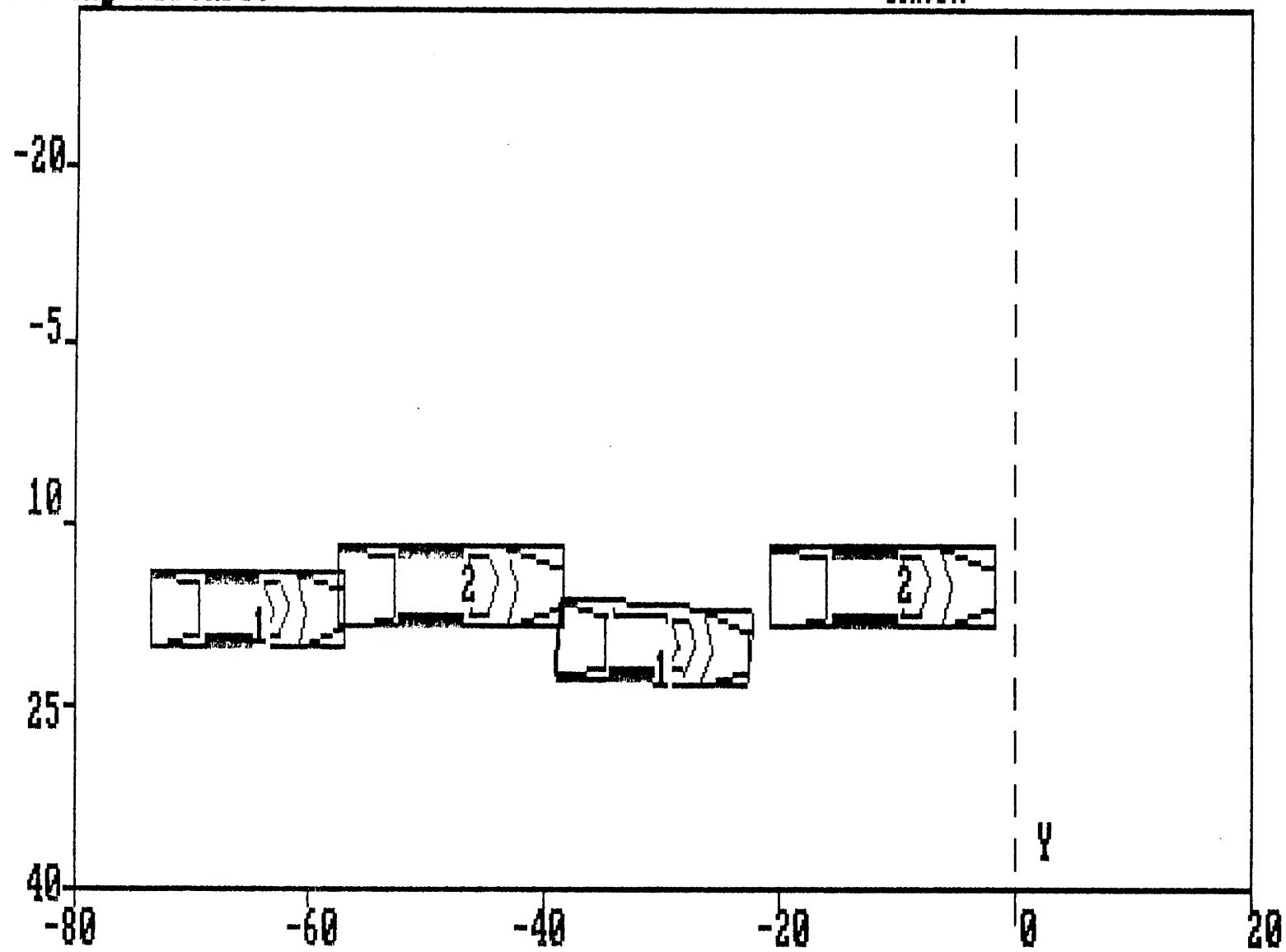
# DIMENSIONS AND INERTIAL PROPERTIES -----

	VEHICLE #1	VEHICLE #2
CG TO FRONT AXLE	130 CM. ( 51 IN.)	153 CM. ( 60 IN.)
CG TO REAR AXLE	141 CM. ( 56 IN.)	165 CM. ( 65 IN.)
TRACK	150 CM. ( 59 IN.)	162 CM. ( 64 IN.)
CG TO FRONT OF VEH	228 CM. ( 90 IN.)	265 CM. ( 104 IN.)
CG TO REAR OF VEH	-270 CM. (-106 IN.)	-318 CM. (-125 IN.)
CG TO SIDE OF VEH	92 CM. ( 36 IN.)	101 CM. ( 40 IN.)
MOMENT OF INERTIA	12100 KGS ( 26675 LBS)	28083 KGS ( 61912 LBS)
VEHICLE MASS	4 KGS ( 8 LBS)	7 KGS ( 15 LBS)
ROLLING RESISTANCE		
LEFT FRONT WHEEL	.29	.01
RIGHT FRONT WHEEL	.29	.01
LEFT REAR WHEEL	.01	.29
RIGHT REAR WHEEL	.01	.29

COEFFICIENT OF FRICTION = .70

Printing Picture:

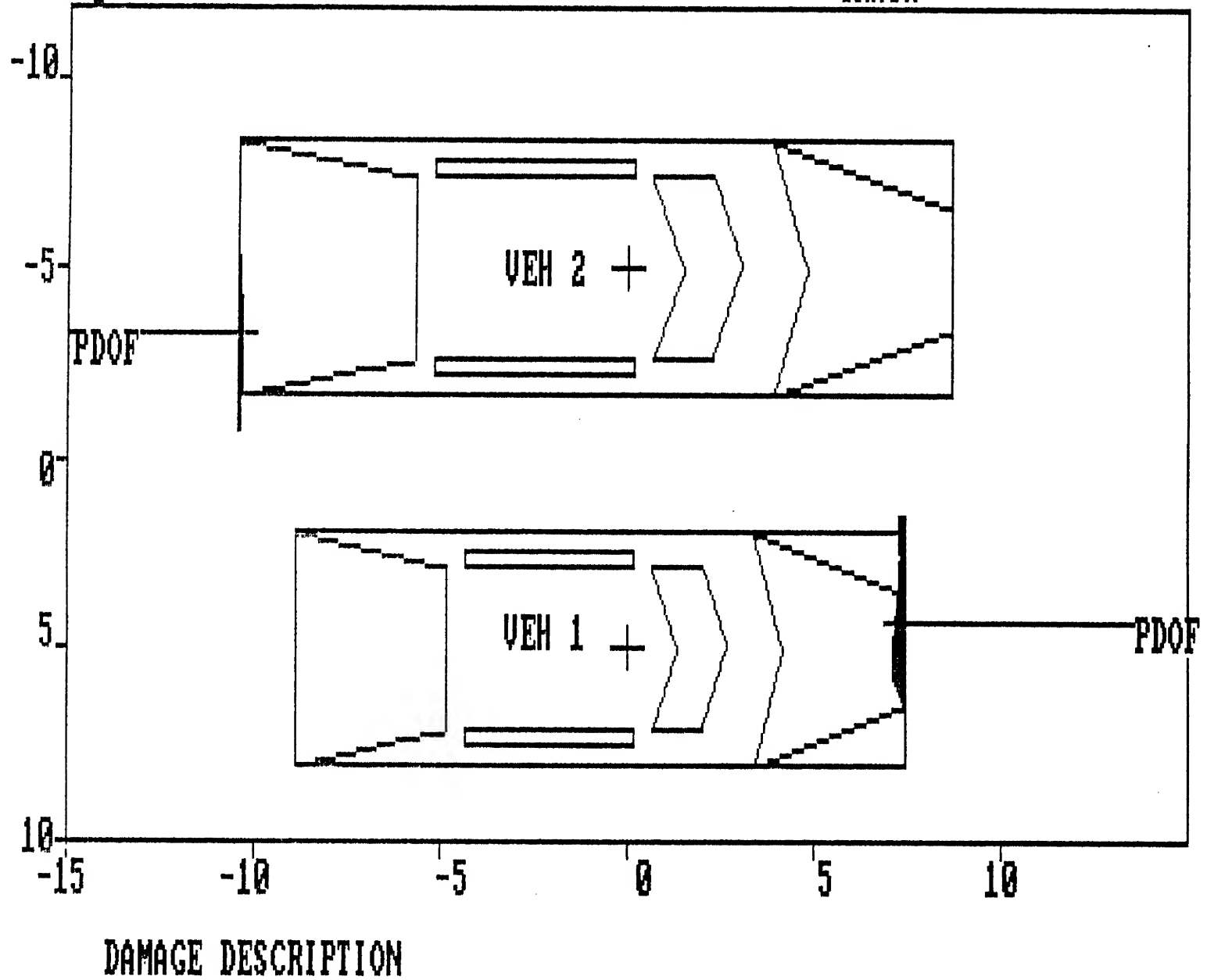
CRASH



SCENE DESCRIPTION

Printing Picture:

CRASH



**APPENDIX C**  
**NASS Vehicle Forms**





## National Accident Sampling System-Crashworthiness Data System: General Vehicle Form

Page 2

## OCCUPANT RELATED

16. Driver Presence in Vehicle 1  
 (0) Driver not present  
 (1) Driver present  
 (9) Unknown
17. Number of Occupants This Vehicle 0 1  
 (00-96) Code actual number of occupants for this vehicle  
 (97) 97 or more  
 (99) Unknown
18. Number of Occupant Forms Submitted 0 1

## VEHICLE WEIGHT ITEMS

19. Vehicle Curb Weight 1 3 4 0  
 Code weight to nearest 10 kilograms.  
 (045) Less than 450 kilograms  
 (610) 6,100 kilograms or more  
 (999) Unknown  
2 9 5 6 lbs X .4536 = 1 3 4 1 kgs  
 Source:
20. Vehicle Cargo Weight 0 0 0 0  
 Code weight to nearest 10 kilograms.  
 (000) Less than 5 kilograms  
 (450) 4,500 kilograms or more  
 (999) Unknown  
0 0 0 0 6 lbs X .4536 = 0 0 0 3 kgs

## RECONSTRUCTION DATA

21. Towed Trailing Unit 0  
 (0) No towed unit  
 (1) Yes—towed trailing unit  
 (9) Unknown
22. Documentation of Trajectory Data for This Vehicle 1  
 (0) No  
 (1) Yes
23. Post Collision Condition of Tree or Pole (For Highest Delta V) 0  
 (0) Not collision (for highest delta V) with tree or pole  
 (1) Not damaged  
 (2) Cracked/sheared  
 (3) Tilted <45 degrees  
 (4) Tilted ≥45 degrees  
 (5) Uprooted tree  
 (6) Separated pole from base  
 (7) Pole replaced  
 (8) Other (specify):  
                                      
 (9) Unknown

24. Rollover 0  
 (0) No rollover (no overturning)  
*Rollover (primarily about the longitudinal axis)*  
 (1) Rollover, 1 quarter turn only  
 (2) Rollover, 2 quarter turns  
 (3) Rollover, 3 quarter turns  
 (4) Rollover, 4 or more quarter turns (specify):  
                                      
 (5) Rollover--end-over-end (i.e., primarily about the lateral axis)  
 (9) Rollover (overturn), details unknown

## OVERRIDE/UNDERRIDE (THIS VEHICLE)

25. Front Override/Underride (this Vehicle) 0
26. Rear Override/Underride (this Vehicle) 0  
 (0) No override/underride, or not an end-to-end impact  
*Override (see specific CDC)*  
 (1) 1st CDC  
 (2) 2nd CDC  
 (3) Other not automated CDC (specify):  
                                      
*Underride (see specific CDC)*  
 (4) 1st CDC  
 (5) 2nd CDC  
 (6) Other not automated CDC (specify):  
                                      
 (7) Medium/heavy truck or bus override  
 (9) Unknown

## HEADING ANGLE AT IMPACT FOR HIGHEST DELTA V

- Values: (000)-(359) Code actual value  
 (997) Noncollision  
 (998) Impact with object  
 (999) Unknown
27. Heading Angle For This Vehicle 1 8 0
28. Heading Angle For Other Vehicle 1 8 0

## National Accident Sampling System-Crashworthiness Data System: General Vehicle Form

Page 3

29. Basis for Total Delta V (highest) 2*Delta V Calculated*

- (1) CRASH program—damage only routine
- (2) CRASH program—damage and trajectory routine
- (3) Missing vehicle algorithm

*Delta V Not Calculated*

- (4) At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program, regardless of collision conditions.
- (5) All vehicles within scope (CDC applicable) of CRASH program but one of the collision conditions is beyond the scope of the CRASH program or other acceptable reconstruction technique, regardless of adequacy of damage data.
- (6) All vehicle and collision conditions are within scope of one of the acceptable reconstruction programs, but there is insufficient data available.

## COMPUTER GENERATED DELTA V

30. Total Delta V

Secondary Highest

0 1 616 (10 mph) Nearest kph

(NOTE: 000 means less than  
0.5 kph)  
(160) 159.5 kph and above  
(999) Unknown

31. Longitudinal Component of  
Delta V+ 0 1 6-16 (10 mph) Nearest kph

(NOTE: \_000 means greater than  
-0.5 kph and less than +0.5 kph)  
(±160) ±159.5 kph and above  
(\_999) Unknown

Secondary

Highest

32. Lateral Component of Delta V ⊕- 0 0 1160 mph Nearest kph

(NOTE: \_000 means greater than  
-0.5 kph and less than +0.5 kph)  
(±160) ±159.5 kph and above  
(\_999) Unknown

33. Energy Absorption

0 1 3 1 0 0131 29 Nearest 100 joules

(96 Fr-16)

(NOTE: 0000 means less than 50 joules)  
(9997) 999,650 joules or more  
(9999) Unknown

34. Confidence In Reconstruction Program  
Results (For Highest Delta V)

- (0) No reconstruction
- (1) Collision fits model — results appear reasonable
- (2) Collision fits model — results appear high
- (3) Collision fits model — results appear low
- (4) Borderline reconstruction — results appear reasonable

35. Type of Vehicle Inspection

- (0) No inspection
- (1) Complete inspection
- (2) Partial inspection (specify):

36. Is this an AOPS Vehicle?

- (0) No
- (1) Yes - researcher determined
- (2) VIN determined air bag system
- (3) VIN determined automatic (passive) belts
- (4) VIN determined air bag and automatic (passive) belts

IS OLDMISS APPLICABLE FOR THIS VEHICLE? [ ] YES [ ] NO

IF YES: IS A COMPLETED OLDMISS PROGRAM SUMMARY INCLUDED? [ ] YES [ ] NO

## National Accident Sampling System-Crashworthiness Data System: General Vehicle Form

Page 4

37. Police Reported Other Drug Presence 7

- (0) No other drugs present
- (1) Yes (other drug present)
- (7) Not reported
- (8) No driver present
- (9) Unknown

38. Police Reported Drug Evaluation Classification (DEC) Test For Driver 0

- (0) No DEC process available or given
- (1) DEC process given, results known
- (2) DEC process given, results unknown
- (3) DEC process available, unknown if given
- (8) No driver present

39. Other Drug Specimen Test Type For Driver 0

- (0) No specimen test given
- (1) Blood test
- (2) Urine test
- (3) Other specimen tests (specify):

- 
- (7) Unspecified specimen test
  - (8) No driver present
  - (9) Unknown if specimen test given

### DRUG EVALUATION CLASSIFICATION

#### OTHER DRUGS TEST RESULTS FOR DRIVER

	DEC Test Results	Specimen Test Results
Narcotic Drug	40. <u>0</u>	41. <u>1</u>
Depressant Drug	42. <u>0</u>	43. <u>1</u>
Stimulant Drug	44. <u>0</u>	45. <u>1</u>
Hallucinogen Drug	46. <u>0</u>	47. <u>7</u>
Cannabinoid Drug	48. <u>0</u>	49. <u>1</u>
Phencyclidine (PCP)	50. <u>0</u>	51. <u>7</u>
Inhalant Drug	52. <u>0</u>	53. <u>7</u>
Other Drug (Excluding Nicotine, Aspirin, Alcohol, Drugs Administered Post-Crash)	54. <u>0</u>	55. <u>7</u>

## Codes For DEC Test Results

- (0) No DEC test given
- (1) Passed DEC test
- (2) Failed DEC test
- (3) DEC test given—results unknown
- (8) No driver present
- (9) Unknown if DEC test given

## Codes for Specimen Test Results

- (0) No specimen test given
- (1) Drug not found in specimen
- (2) Drug found in specimen
- (7) Specimen test given, results unknown or not obtained
- (8) No driver present
- (9) Unknown if specimen test given

## OTHER DATA

## 56. Driver's Zip Code

- (00000) Driver not present  
 (00001) Driver not a resident of U.S. or territories  
           Code actual 5-digit zip code  
 (99999) Unknown

## 57. Driver's Race/Ethnic Origin

- (0) Driver not present  
 (1) White (non-Hispanic)  
 (2) Black (non-Hispanic)  
 (3) White (Hispanic)  
 (4) Black (Hispanic)  
 (5) American Indian, Eskimo or Aleut  
 (6) Asian or Pacific Islander  
 (8) Other (specify): \_\_\_\_\_

(9) Unknown

## 58. Vehicle Special Use (This Trip)

- (0) No special use  
 (1) Taxi  
 (2) Vehicle used as school bus  
 (3) Vehicle used as other bus  
 (4) Military  
 (5) Police  
 (6) Ambulance  
 (7) Fire truck or car  
 (8) Other (specify): \_\_\_\_\_  
 (9) Unknown

## ROLLOVER DATA

If GV07 (Body Type)  $\neq$  1-49, leave GV59-GV63 blank.  
 If GV24 (Rollover) = 0, then GV59-GV63 must equal 0.  
 If GV24 = 9, then GV59-GV63 must equal 9.

## 59. Rollover Initiation Type

- (0) No rollover  
 (1) Trip-over  
 (2) Flip-over  
 (3) Turn-over  
 (4) Climb-over  
 (5) Fall-over  
 (6) Bounce-over  
 (7) Collision with another vehicle  
 (8) Other rollover initiation type specify): \_\_\_\_\_

(9) Unknown rollover initiation type

## 60. Location of Rollover Initiation

- (0) No rollover  
 (1) On roadway  
 (2) On shoulder—paved  
 (3) On shoulder—unpaved  
 (4) On roadside or divided trafficway median  
 (9) Unknown

## 61. Rollover Initiation Object Contacted

## 62. Location on Vehicle Where Initial Principal Tripping Force Is Applied

- (0) No rollover  
 (1) Wheels/tires  
 (2) Side plane  
 (3) End plane  
 (4) Undercarriage  
 (5) Other location on vehicle (specify): \_\_\_\_\_  
 (8) Non-contact rollover forces (specify): \_\_\_\_\_  
 (9) Unknown

## 63. Direction of Initial Roll

- (0) No rollover  
 (1) Roll right - primarily about the longitudinal axis  
 (2) Roll left - primarily about the longitudinal axis  
 (5) End-over-end (i.e., primarily about the lateral axis)  
 (9) Unknown roll direction

## PRECRASH DATA

## 64. Pre-Event Movement (Prior to Recognition of Critical Event)

- (01) Going straight  
 (02) Slowing or stopping in traffic lane  
 (03) Starting in traffic lane  
 (04) Stopped in traffic lane  
 (05) Passing or overtaking another vehicle  
 (06) Disabled or parked in travel lane  
 (07) Leaving a parking position  
 (08) Entering a parking position  
 (09) Turning right  
 (10) Turning left  
 (11) Making a U-turn  
 (12) Backing up (other than for parking position)  
 (13) Negotiating a curve  
 (14) Changing lanes  
 (15) Merging  
 (16) Successful avoidance maneuver to a previous critical event  
 (97) Other (specify): \_\_\_\_\_  
 (98) No driver present  
 (99) Unknown

## PRECRASH DATA (Continued)

65. Critical Precrash Event 98*This Vehicle Loss of Control Due To:*

- (01) Blow out or flat tire
- (02) Stalled engine
- (03) Disabling vehicle failure (e.g., wheel fell off) (specify): \_\_\_\_\_
- (04) Non-disabling vehicle problem (e.g., hood flew up) (specify): \_\_\_\_\_
- (05) Poor road conditions (puddle, pot hole, ice, etc.) (specify): \_\_\_\_\_
- (06) Traveling too fast for conditions
- (08) Other cause of control loss (specify): \_\_\_\_\_

## (09) Unknown cause of control loss

*This Vehicle Traveling*

- (10) Over the lane line on left side of travel lane
- (11) Over the lane line on right side of travel lane
- (12) Off the edge of the road on the left side
- (13) Off the edge of the road on the right side
- (14) End departure
- (15) Turning left at intersection
- (16) Turning right at intersection
- (17) Crossing over (passing through) intersection
- (19) Unknown travel direction

*Other Motor Vehicle In Lane*

- (50) Stopped
- (51) Traveling in same direction with lower speed (i.e., lower steady speed or decelerating)
- (52) Traveling in same direction with higher speed
- (53) Traveling in opposite direction
- (54) In crossover
- (55) Backing
- (59) Unknown travel direction of other motor vehicle in lane

*Other Motor Vehicle Encroaching Into Lane*

- (60) From adjacent lane (same direction)—over left lane line
- (61) From adjacent lane (same direction)—over right lane line
- (62) From opposite direction—over left lane line
- (63) From opposite direction—over right lane line
- (64) From parking lane
- (65) From crossing street, turning into same direction
- (66) From crossing street, across path
- (67) From crossing street, turning into opposite direction
- (68) From crossing street, intended path not known
- (70) From driveway, turning into same direction
- (71) From driveway, across path
- (72) From driveway, turning into opposite direction
- (73) From driveway, intended path not known
- (74) From entrance to limited access highway
- (78) Encroachment by other vehicle—details unknown

*Pedestrian or Pedalcyclist, or Other Nonmotorist*

- (80) Pedestrian in roadway
- (81) Pedestrian approaching roadway
- (82) Pedestrian - unknown location
- (83) Pedalcyclist or other nonmotorist in roadway (specify): \_\_\_\_\_
- (84) Pedalcyclist or other nonmotorist approaching roadway (specify): \_\_\_\_\_
- (85) Pedalcyclist or other nonmotorist—unknown location (specify): \_\_\_\_\_

*Object or Animal*

- (87) Animal in roadway
- (88) Animal approaching roadway
- (89) Animal—unknown location
- (90) Object in roadway
- (91) Object approaching roadway
- (92) Object—unknown location

## (98) Other critical precrash event (specify):

- Other Motor Vehicle in lane, accelerating*
- (99) Unknown from stopped position

For Corrective Actions Attempted see variable GV14  
(Attempted Avoidance Manuever)

66. Precrash Stability After Avoidance Manuever 1

- (0) No avoidance manuever
- (1) Tracking
- (2) Skidding longitudinally—rotation less than 30 degrees
- (3) Skidding laterally—clockwise rotation
- (4) Skidding laterally—counterclockwise rotation
- (7) Other vehicle loss-of-control (specify): \_\_\_\_\_

- (8) No driver present
- (9) Precrash stability unknown

67. Precrash Directional Consequences of Avoidance Manuever (Corrective Action) 1

- (0) No avoidance manuever
- (1) Vehicle stayed in travel lane where avoidance manuever was initiated
- (2) Vehicle stayed on roadway but left travel lane where avoidance manuever was initiated
- (3) Vehicle stayed on roadway, not known if left travel lane where avoidance manuever was initiated
- (4) Vehicle departed roadway
- (5) Avoidance manuever initiated off roadway
- (8) No driver present
- (9) Directional consequences unknown

\*\*\* IF THE CDS APPLICABLE VEHICLE WAS NOT INSPECTED (I.E., GV35=0), \*\*\*  
DO NOT COMPLETE THE EXTERIOR AND INTERIOR VEHICLE FORMS.

\*\*\* IF GV07 DOES NOT EQUAL 01-49, DO NOT COMPLETE \*\*\*  
THE EXTERIOR VEHICLE, INTERIOR VEHICLE,  
OCCUPANT ASSESSMENT, AND OCCUPANT INJURY FORMS.



U.S. Department of Transportation  
National Highway Traffic Safety  
Administration

**EXTERIOR VEHICLE FORM**

NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number	3. Vehicle Number <u>01</u>
2. Case Number - Stratum <u>93-9</u>	

**VEHICLE IDENTIFICATION**

VIN 1FACP52UXL6 (REDACTED) Model Year 90

Vehicle Make (specify): Ford Vehicle Model (specify): Taurus GL

**LOCATOR**

Locate the end of the damage with respect to the vehicle longitudinal center line or bumper corner for end impacts or an undamaged axle for side impacts.

Specific Impact No.	Location of Direct Damage	Location of Field L
1	Begin @ (D) bumper corner & extends to 23.5cm (9.25") (R) of &	Entire frontal plane
2	Begin 20.3cm (8") right of left front bumper corner	Begin 14.6cm (5.75") right of left bumper corner

**CRUSH PROFILE IN CENTIMETERS**

NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).

Measure and document on the vehicle diagram the location of maximum crush.

Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.

Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.

Use as many lines/columns as necessary to describe each damage profile.

Specific Impact Number	Plane of Impact C-Measurements	Direct Damage		Field L	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	C <sub>6</sub>	±D
		Width (CDC)	Max Crush								
1	Bumper level	100.3 (39.5")	14.6 (5.75")	14.9 (5.875")	20.3 (8")	12.1cm	8.9cm	11.4cm	8.3cm	7.6cm	-27.3cm
	Free space		3.8 (1.5")		15.2cm	7.6cm	3.2cm	2.5cm	7.6cm	15.2cm	(-10.75")
	Resultant		10.8 (4.25")		5.1cm	4.5cm	5.7cm	8.9cm	0.7cm	0	
			located 23.5cm (9.25") (R) of &		(2")	(1.75")	(2.25")	(3.5")	(0.25")		
2	Bumper level	2.5 (1")	1.2cm (0.5")	11.4 (4.5")	0	1.2 (0.5")	1.2 (0.5")	0			-56.5
											(-22.25")

## ORIGINAL SPECIFICATIONS WORK SHEET

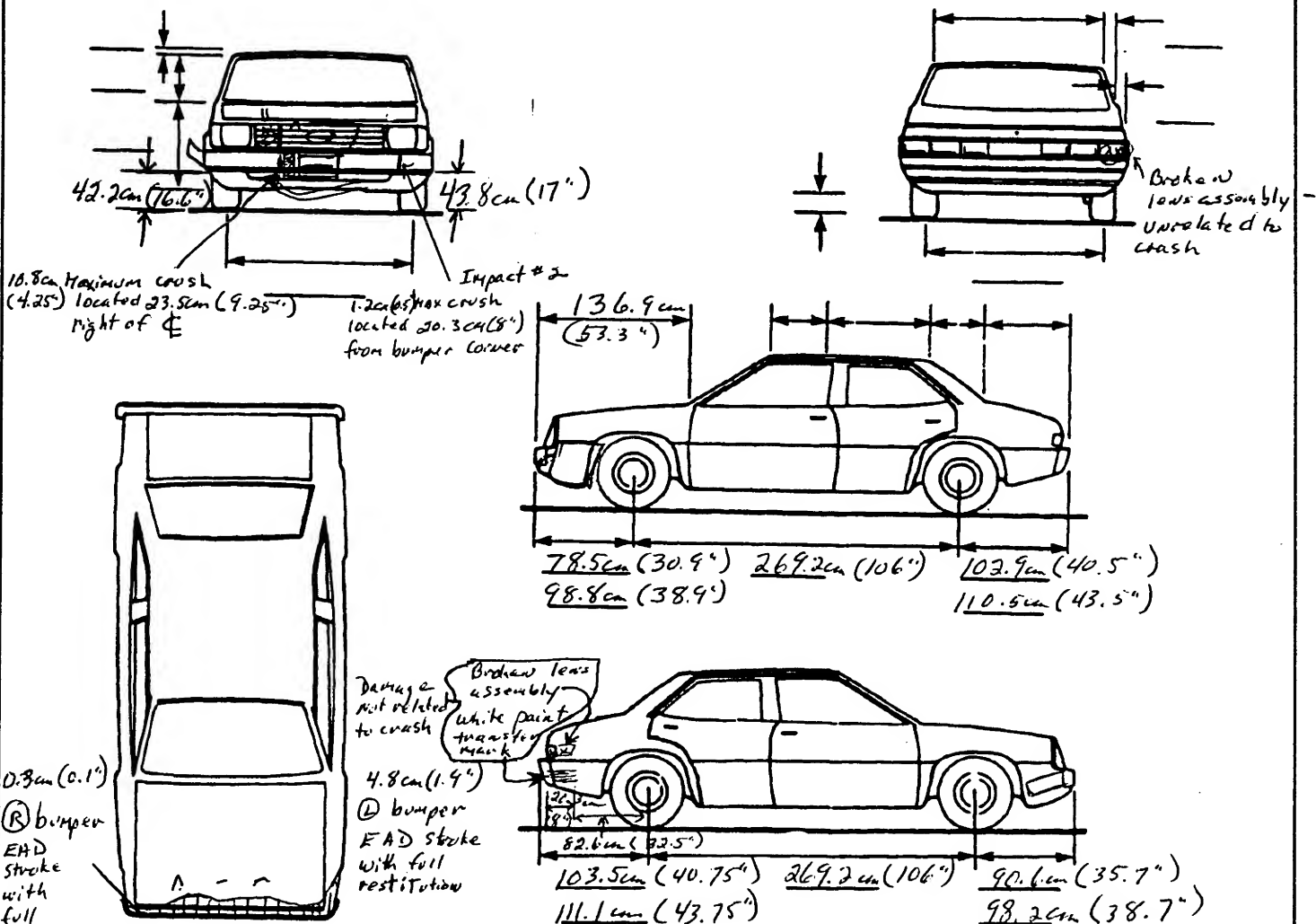
Wheelbase	<u>1</u> <u>0</u> <u>6</u> <u>.0</u>	inches	x 2.54	=	<u>2</u> <u>6</u> <u>9</u>	cm
Overall Length	<u>1</u> <u>8</u> <u>8</u> <u>.4</u>	inches	x 2.54	=	<u>4</u> <u>7</u> <u>9</u>	cm
Maximum Width	<u>  </u> <u>7</u> <u>0</u> <u>.8</u>	inches	x 2.54	=	<u>  </u> <u>1</u> <u>8</u> <u>0</u>	cm
Curb Weight	<u>  </u> <u>2</u> <u>,</u> <u>9</u> <u>5</u> <u>6</u>	pounds	x .4536	=	<u>  </u> <u>1</u> <u>,</u> <u>3</u> <u>4</u> <u>1</u>	kg
Average Track	<u>  </u> <u>6</u> <u>1</u> <u>.1</u>	inches	x 2.54	=	<u>  </u> <u>1</u> <u>5</u> <u>5</u>	cm
Front Overhang	<u>  </u> <u>3</u> <u>8</u> <u>.9</u>	inches	x 2.54	=	<u>  </u> <u>  </u> <u>9</u> <u>9</u>	cm
Rear Overhang	<u>  </u> <u>4</u> <u>3</u> <u>.5</u>	inches	x 2.54	=	<u>  </u> <u>1</u> <u>1</u> <u>0</u>	cm
Undeformed End Width	<u>  </u> <u>6</u> <u>0</u> <u>.5</u>	inches	x 2.54	=	<u>  </u> <u>1</u> <u>5</u> <u>4</u>	cm
Engine Size: cyl./displ.	<u>  </u> <u>  </u> <u>  </u> <u>  </u>	cc	x .001	=	<u>  </u> <u>3</u> <u>.0</u>	L
	<u>  </u> <u>  </u> <u>  </u>	CID	x .0164	=	<u>  </u> <u>  </u> <u>:</u> <u>  </u>	L



## VEHICLE DAMAGE SKETCH

<b>TIRE—WHEEL DAMAGE</b> a. Rotation physically restricted RF <u>2</u> LF <u>2</u> RR <u>2</u> LR <u>2</u> (1) Yes (2) No (8) NA (9) Unk.		b. Tire deflated RF <u>2</u> LF <u>2</u> RR <u>2</u> LR <u>2</u>		<b>ORIGINAL SPECIFICATIONS</b> Wheelbase <u>269 (106.0)</u> cm Overall Length <u>479 (188.4)</u> cm Maximum Width <u>180 (70.8)</u> cm Curb Weight <u>1,341 (2,956.4)</u> kg Average Track <u>155 (61.1)</u> cm Front Overhang <u>99 (38.9)</u> cm Rear Overhang <u>110 (43.5)</u> cm Undeformed End Width <u>154 (60.5)</u> cm Engine Size: cyl./displ. <u>3.0</u> L		<b>WHEEL STEER ANGLES</b> (For locked front wheels or displaced rear axles only) RF $\pm$ <u>00</u> ° LF $\pm$ <u>00</u> ° RR $\pm$ <u>00</u> ° LR $\pm$ <u>00</u> ° Within $\pm$ 5 degrees	
<b>TYPE OF TRANSMISSION</b> <input type="checkbox"/> Manual <input checked="" type="checkbox"/> Automatic				<b>DRIVE WHEELS</b> <input checked="" type="checkbox"/> FWD <input type="checkbox"/> RWD <input type="checkbox"/> 4WD			
				Approximate Cargo Weight <u>2.7 (6 lb)</u> kg			

## MEASUREMENTS IN CENTIMETERS



## NOTES:

Sketch new perimeter and cross hatch direct damage and single hatch induced damage on all views. Annotate observations which might be useful in reconstructing the accident (e.g., grass in tire bead, direction of striations, scuff on sidewalls, etc.). If pulling trailer, sketch type of trailer and damage received on the back of this page.

Annotate any damage caused by extrication such as component removal by torching, prying, or hydraulic shears.

## CDC WORKSHEET

## CODES FOR OBJECT CONTACTED

(01-30) — Vehicle Number

## Noncollision

- (31) Overturn — rollover  
 (32) Fire or explosion  
 (33) Jackknife  
 (34) Other intraunit damage (specify): \_\_\_\_\_

- (35) Noncollision injury  
 (38) Other noncollision (specify): \_\_\_\_\_

(39) Noncollision — details unknown

## Collision With Fixed Object

- (41) Tree ( $\leq 10$  cm in diameter)  
 (42) Tree ( $> 10$  cm in diameter)  
 (43) Shrubbery or bush  
 (44) Embankment

(45) Breakaway pole or post (any diameter)

## Nonbreakaway Pole or Post

- (50) Pole or post ( $\leq 10$  cm in diameter)  
 (51) Pole or post ( $> 10$  cm but  $\leq 30$  cm in diameter)  
 (52) Pole or post ( $> 30$  cm in diameter)  
 (53) Pole or post (diameter unknown)

- (54) Concrete traffic barrier  
 (55) Impact attenuator  
 (56) Other traffic barrier (includes guardrail)  
 (specify): \_\_\_\_\_

- (57) Fence  
 (58) Wall  
 (59) Building  
 (60) Ditch or culvert  
 (61) Ground  
 (62) Fire hydrant  
 (63) Curb  
 (64) Bridge  
 (68) Other fixed object (specify): \_\_\_\_\_

(69) Unknown fixed object

## Collision with Nonfixed Object

- (71) Motor vehicle not in-transport  
 (72) Pedestrian  
 (73) Cyclist or cycle  
 (74) Other nonmotorist or conveyance

- (75) Vehicle occupant  
 (76) Animal  
 (77) Train  
 (78) Trailer, disconnected in transport  
 (88) Other nonfixed object (specify): \_\_\_\_\_

(89) Unknown nonfixed object

(98) Other event (specify): \_\_\_\_\_

(99) Unknown event or object

## DEFORMATION CLASSIFICATION BY EVENT NUMBER

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force (degrees)	Incremental Value of Shift	(3) Deformation Location	(4) Specific Longitudinal or Lateral Location	(5) Specific Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
01	02	360	00	F	Y	F	W	01
02	02	360	00	F	L	L	N	01
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—

## COLLISION DEFORMATION CLASSIFICATION

## HIGHEST DELTA "V"

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force	(3) Deformation Location	(4) Longitudinal or Lateral Location	(5) Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
4. <u>01</u>	5. <u>02</u>	6. <u>12</u>	7. <u>F</u>	8. <u>Y</u>	9. <u>F</u>	10. <u>W</u>	11. <u>01</u>

## Second Highest Delta "V"

12. <u>02</u>	13. <u>02</u>	14. <u>12</u>	15. <u>F</u>	16. <u>L</u>	17. <u>L</u>	18. <u>N</u>	19. <u>01</u>
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## CRUSH PROFILE IN CENTIMETERS

The crush profile for the damage described in the CDC(s) above should be documented in the appropriate space below. (ALL MEASUREMENTS ARE IN CENTIMETERS.)

## HIGHEST DELTA "V"

20. <u>L</u>	21. <u>C<sub>1</sub></u>	<u>C<sub>2</sub></u>	<u>C<sub>3</sub></u>	<u>C<sub>4</sub></u>	<u>C<sub>5</sub></u>	<u>C<sub>6</sub></u>	22. <u>±D</u>
<u>154</u>	<u>005</u>	<u>005</u>	<u>006</u>	<u>009</u>	<u>011</u>	<u>000</u>	<u>+ 027</u>
					↑ MAX crush		

## Second Highest Delta "V"

23. <u>L</u>	24. <u>C<sub>1</sub></u>	<u>C<sub>2</sub></u>	<u>C<sub>3</sub></u>	<u>C<sub>4</sub></u>	<u>C<sub>5</sub></u>	<u>C<sub>6</sub></u>	25. <u>±D</u>
<u>011</u>	<u>000</u>	<u>001</u>	<u>001</u>	<u>000</u>	<u>---</u>	<u>---</u>	<u>+ 057</u>

26. Are CDCs Documented but Not Coded on The Automated File? 0  
(0) No  
(1) Yes

27. Researcher's Assessment of Vehicle Disposition 1  
(0) Not towed due to vehicle damage  
(1) Towed due to vehicle damage  
(9) Unknown

28. Original Wheelbase 269  
269 Code to the nearest centimeter  
(999) Unknown

\_\_\_\_\_ inches X 2.54 = \_\_\_\_\_ centimeters

<p>29. Is This A Multi-Stage Manufactured Vehicle And/Or A Certified Altered Vehicle? <u>0</u></p> <p>(0) No post manufacturer modifications (1) Yes - post manufacturer modifications (specify): _____</p> <p>_____ (Include photograph of CERTIFICATION PLACARD in case report)</p> <p>(9) Unknown if vehicle is modified</p> <p>30. Fire Occurrence <u>0</u></p> <p>(0) No fire</p> <p>Yes, fire occurred (1) Minor (2) Major (9) Unknown</p>	<p>31. Origin of Fire <u>0</u></p> <p>(0) No fire (1) Vehicle exterior (front, side, back, top) (2) Exhaust system (3) Fuel tank (and other fuel retention system parts) (4) Engine compartment (5) Cargo/trunk compartment (6) Instrument panel (7) Passenger compartment area (8) Other location (specify): _____ (9) Unknown</p> <p>32. Type of Fuel Tank <u>1</u></p> <p>(0) No fuel tank (electrical vehicle) (1) Metallic (2) Non-metallic (9) Unknown</p>
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

\*\*\* STOP: IF THE CDS APPLICABLE VEHICLE WAS NOT TOWED AND WAS NOT AN AOPS \*\*\*  
(I.E., GV09=0 OR 9 AND GV36=0), DO NOT COMPLETE THE INTERIOR VEHICLE FORM.



# INTERIOR VEHICLE FORM

BEST AVAILABLE COPY

NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number

2. Case Number - Stratum

93-9

3. Vehicle Number

01

## INTEGRITY

4. Passenger Compartment Integrity

00

(00) No integrity loss

Yes, Integrity Was Lost Through

(01) Windshield

(02) Door (side)

(03) Door/hatch (back door)

(04) Roof

(05) Roof glass

(06) Side window

(07) Rear window (backlight)

(08) Roof and roof glass

(09) Windshield and door (side)

(10) Windshield and roof

(11) Side and rear window (side window and backlight)

(12) Windshield and side window

(13) Door and side window

(98) Other combination of above (specify):

(99) Unknown

Door, Tailgate or Hatch Opening

5. LF / 6. RF / 7. LR / 8. RR / 9. TG/H 0

(0) No door/gate/hatch

(1) Door/gate/hatch remained closed and operational

(2) Door/gate/hatch came open during collision

(3) Door/gate/hatch jammed shut

(8) Other (specify):

(9) Unknown

Damage/Failure Associated with Door, Tailgate or Hatch Opening in Collision. If IV05-IV09  $\neq$  2, Then code 0.

10. LF 0 11. RF 0 12. LR 0 13. RR 0 14. TG/H 0

(0) No door/gate/hatch or door not opened

Door, Tailgate or Hatch Came Open During Collision

(1) Door operational (no damage)

(2) Latch/striker failure due to damage

(3) Hinge failure due to damage

(4) Door structure failure due to damage

(5) Door support (i.e., pillar, sill, roof side rail, etc.) failure due to damage

(6) Latch/striker and hinge failure due to damage

(8) Other failure (specify):

(9) Unknown

## GLAZING

Glazing Damage from Impact Forces

15. WS 2 16. LF 0 17. RF 0 18. LR 0 19. RR 0

20. BL 0 21. Roof 8 22. Other 0

*Previous stone chip in WS elongated by impact forces*

(0) No glazing damage from impact forces

(2) Glazing in place and cracked from impact forces

(3) Glazing in place and holed from impact forces

(4) Glazing out-of-place (cracked or not) and not holed from impact forces

(5) Glazing out-of-place and holed from impact forces

(6) Glazing disintegrated from impact forces

(7) Glazing removed prior to accident

(8) No glazing

(9) Unknown if damaged

Glazing Damage from Occupant Contact

23. WS 0 24. LF 0 25. RF 0 26. LR 0 27. RR 0

28. BL 0 29. Roof 0 30. Other 0

(0) No occupant contact to glazing or no glazing

(1) Glazing contacted by occupant but no glazing damage

(2) Glazing in place and cracked by occupant contact

(3) Glazing in place and holed by occupant contact

(4) Glazing out-of-place (cracked or not) by occupant contact and not holed by occupant contact

(5) Glazing out-of-place by occupant contact and holed by occupant contact

(6) Glazing disintegrated by occupant contact

(9) Unknown if contacted by occupant

If No Glazing Damage *And* No Occupant Contact or No Glazing, Then Code IV31 Through IV46 As 0

Type of Window/Windshield Glazing

31. WS / 32. LF 0 33. RF 0 34. LR 0 35. RR 0

36. BL 0 37. Roof 0 38. Other 0

(0) No glazing contact and no damage, or no glazing

(1) AS-1 - Laminated

(2) AS-2 - Tempered

(3) AS-3 - Tempered-tinted

(4) AS-14 - Glass/Plastic

(8) Other (specify):

(9) Unknown

Window Precrash Glazing Status

39. WS / 40. LF 0 41. RF 0 42. LR 0 43. RR 0

44. BL 0 45. Roof 0 46. Other 0

(0) No glazing contact and no damage, or no glazing

(1) Fixed

(2) Closed

(3) Partially opened

(4) Fully opened

(9) Unknown

## OCCUPANT AREA INTRUSION

Note: If no intrusions, leave variables IV47-IV86 blank.

## INTRUDING COMPONENT

## Interior Components

- (01) Steering assembly  
 (02) Instrument panel left  
 (03) Instrument panel center  
 (04) Instrument panel right  
 (05) Toe pan  
 (06) A (A1/A2)-pillar  
 (07) B-pillar  
 (08) C-pillar  
 (09) D-pillar  
 (10) Door panel (side)  
 (12) Roof (or convertible top)  
 (13) Roof side rail  
 (14) Windshield  
 (15) Windshield header  
 (16) Window frame  
 (17) Floor pan (includes sill)  
 (18) Backlight header  
 (19) Front seat back  
 (20) Second seat back  
 (21) Third seat back  
 (22) Fourth seat back  
 (23) Fifth seat back  
 (24) Seat cushion  
 (25) Back door/panel (e.g., tailgate)  
 (26) Other interior component (specify):

- (27) Side panel - forward of the A (A2)-pillar  
 (28) Side panel - rear of the A (A2)-pillar

## Exterior Components

- (30) Hood  
 (31) Outside surface of this vehicle (specify):  
 (32) Other exterior object in the environment (specify):  
 (33) Unknown exterior object  
 (97) Catastrophic  
 (98) Intrusion of unlisted component(s) (specify):  
 (99) Unknown

## LOCATION OF INTRUSION

## Front Seat

- (11) Left  
 (12) Middle  
 (13) Right

## Fourth Seat

- (41) Left  
 (42) Middle  
 (43) Right

## Second Seat

- (21) Left  
 (22) Middle  
 (23) Right

- (97) Catastrophic  
 (98) Other enclosed area (specify)

(99) Unknown

## Third Seat

- (31) Left  
 (32) Middle  
 (33) Right

## MAGNITUDE OF INTRUSION

- (1)  $\geq 3$  centimeters but  $< 8$  centimeters  
 (2)  $\geq 8$  centimeters but  $< 15$  centimeters  
 (3)  $\geq 15$  centimeters but  $< 30$  centimeters  
 (4)  $\geq 30$  centimeters but  $< 46$  centimeters  
 (5)  $\geq 46$  centimeters but  $< 61$  centimeters  
 (6)  $\geq 61$  centimeters  
 (7) Catastrophic  
 (9) Unknown

## DOMINANT CRUSH DIRECTION

- (1) Vertical  
 (2) Longitudinal  
 (3) Lateral  
 (7) Catastrophic  
 (9) Unknown

*No intrusions in vehicle*

	Location of Intrusion	Intruding Component	Magnitude of Intrusion	Dominant Crush Direction
1st	47. _____	48. _____	49. _____	50. _____
2nd	51. _____	52. _____	53. _____	54. _____
3rd	55. _____	56. _____	57. _____	58. _____
4th	59. _____	60. _____	61. _____	62. _____
5th	63. _____	64. _____	65. _____	66. _____
6th	67. _____	68. _____	69. _____	70. _____
7th	71. _____	72. _____	73. _____	74. _____
8th	75. _____	76. _____	77. _____	78. _____
9th	79. _____	80. _____	81. _____	82. _____
10th	83. _____	84. _____	85. _____	86. _____

## STEERING COLUMN

## 87. Steering Column Type

- (1) Fixed column  
 (2) Tilt column  
 (3) Telescoping column  
 (4) Tilt and telescoping column  
 (8) Other column type (specify):

(9) Unknown

2

*Appeared to be adjusted  
in center position*

## 88. Blank

(This variable is left blank  
so that numbering consistency  
can be maintained with the  
1988-93 CDS.

X X

## 89. Blank

(This variable is left blank  
so that numbering consistency  
can be maintained with the  
1988-93 CDS.

X X X

## 90. Blank

(This variable is left blank  
so that numbering consistency  
can be maintained with the  
1988-93 CDS.

X X X

## 91. Blank

(This variable is left blank  
so that numbering consistency  
can be maintained with the  
1988-93 CDS.

X X X

## 92. Steering Rim/Spoke Deformation

- (0.25\*) 0.6 cm Code actual measured  
 deformation to the nearest centimeter  
 (00) No steering rim deformation  
 (01-14) Actual measured value in centimeters  
 (15) 15 centimeters or more  
 (98) Observed deformation cannot be measured  
 (99) Unknown

0 1

## 93. Location of Steering Rim/Spoke

## Deformation

(00) No steering rim deformation

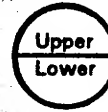
## Quarter Sections

- (01) Section A  
 (02) Section B  
 (03) Section C  
 (04) Section D



## Half Sections

- (05) Upper half of rim/spoke  
 (06) Lower half of rim/spoke  
 (07) Left half of rim/spoke  
 (08) Right half of rim/spoke



- (09) Complete steering wheel collapse  
 (10) Undetermined location  
 (99) Unknown

0 5

## INSTRUMENT PANEL

## 94. Odometer Reading

45,036 kilometers—Code to the  
nearest 1,000 kilometers

- (000) No odometer  
 (001) Less than 1,500 kilometers  
 (500) 499,500 kilometers or more  
 (999) Unknown

0 4 5,000

27,985 miles X 1.6093 = 45,036 kilometers

Source: \_\_\_\_\_

## 95. Instrument Panel Damage from

## Occupant Contact?

- (0) No  
 (1) Yes  
 (9) Unknown

1

## 96. Knee Bolsters Deformed from

## Occupant Contact?

- (0) No  
 (1) Yes  
 (8) Not present  
 (9) Unknown

*contacted by  
driver, but  
not deformed*

0

## 97. Did Glove Compartment Door Open

## During Collision(s)?

- (0) No  
 (1) Yes  
 (8) Not present  
 (9) Unknown

0





## National Accident Sampling System-Crashworthiness Data System: Interior Vehicle Form Page 5

## POINTS OF OCCUPANT CONTACT

Contact	Interior Component Contacted	Occupant No. If Known	Body Region If Known	Supporting Physical Evidence	Confidence Level of Contact Point
A	44	1	Left shoulder	Abraded surface & rotated downward	1
B	54	1	Right hand/arm	Skin transfer	2
C	43	1	Head	Skin transfer	1
D	09	1	Left knee	Skin transfer	1
E	13	1	Right knee	Skin oil transfer	1
F	09	1	Right hand/arm	Indentation	2
G	16	1	Chest/Neck	Abraded surface & skin transfer	1
H					
I					
J					
K					
L					
M					
N					

## CODES FOR INTERIOR COMPONENTS

## FRONT

- (01) Windshield
- (02) Mirror
- (03) Sunvisor
- (04) Steering wheel rim
- (05) Steering wheel hub/spoke
- (06) Steering wheel (combination of codes 04 and 05)
- (07) Steering column, transmission selector lever, other attachment
- (08) Add on equipment (e.g., CB, tape deck, air conditioner)
- (09) Left instrument panel and below
- (10) Center instrument panel and below
- (11) Right instrument panel and below
- (12) Glove compartment door
- (13) Knee bolster
- (14) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (15) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
- (16) Driver side air bag compartment cover
- (17) Passenger side air bag compartment cover
- (18) Windshield reinforced by exterior object (specify):
- (19) Other front object (specify):

- (23) Left B-pillar
- (24) Other left pillar (specify):
- (25) Left side window glass or frame
- (26) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (27) Other left side object (specify):

- (46) Other occupants (specify):

- (47) Interior loose objects
- (48) Child safety seat (specify):

- (49) Other interior object (specify):

## ROOF

- (50) Front header
- (51) Rear header
- (52) Roof left side rail
- (53) Roof right side rail
- (54) Roof or convertible top

## FLOOR

- (56) Floor (including toe pan)
- (57) Floor or console mounted transmission lever, including console
- (58) Parking brake handle
- (59) Foot controls including parking brake

## REAR

- (60) Backlight (rear window)
- (61) Backlight storage rack, door, etc.
- (62) Other rear object (specify):

## RIGHT SIDE

- (30) Right side interior surface, excluding hardware or armrests
- (31) Right side hardware or armrest
- (32) Right A (A1/A2)-pillar
- (33) Right B-pillar
- (34) Other right pillar (specify):
- (35) Right side window glass or frame
- (36) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B pillar, or roof side rail.
- (37) Other right side object (specify):
- (38) Right side window sill

## INTERIOR

- (40) Seat, back support
- (41) Belt restraint webbing/buckle
- (42) Belt restraint B-pillar attachment point
- (43) Other restraint system component (specify): *Courtesy light bracket*
- (44) Head restraint system
- (45) Air bag (use codes "16" and "17" for injuries sustained from air bag compartment covers)

## CONFIDENCE LEVEL OF CONTACT POINT

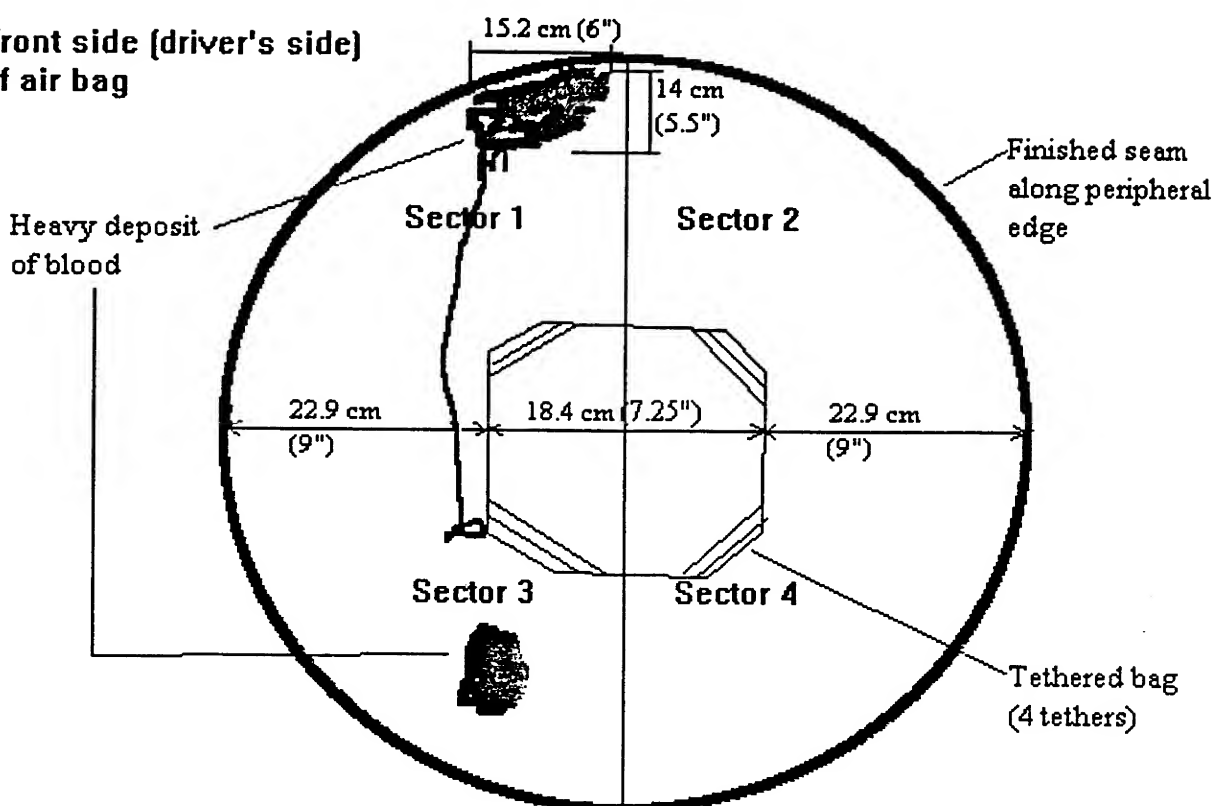
- (1) Certain
- (2) Probable
- (3) Possible
- (9) Unknown

## LEFT SIDE

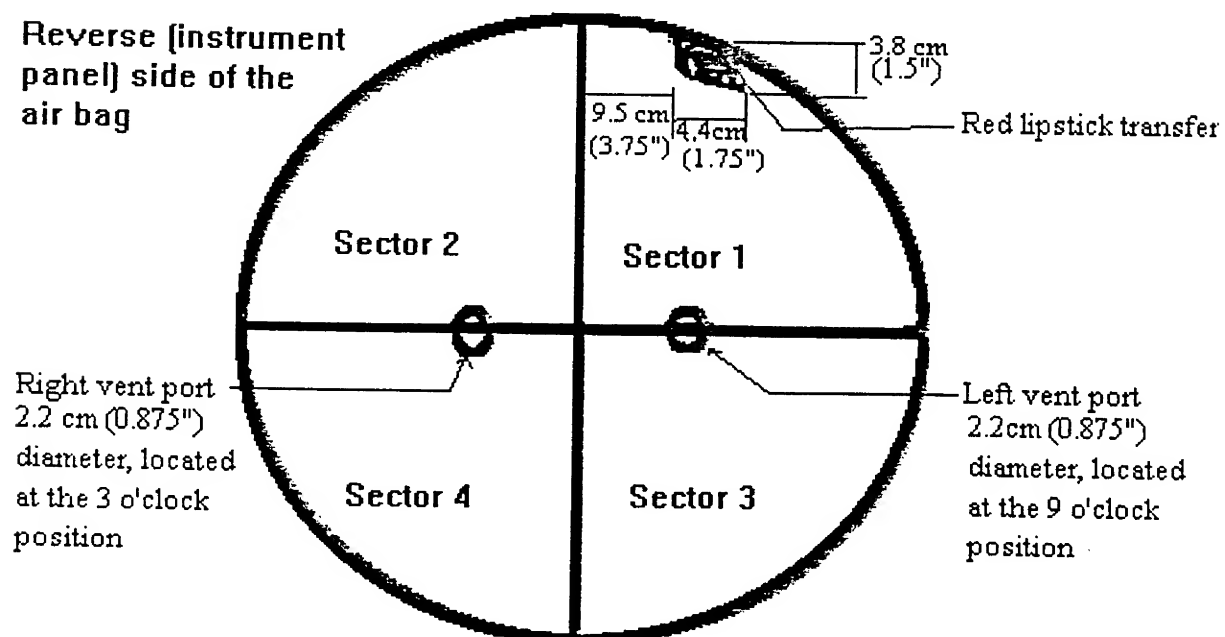
- (20) Left side interior surface, excluding hardware or armrests
- (21) Left side hardware or armrest
- (22) Left A (A1/A2)-pillar

## AIR BAG CONTACTS

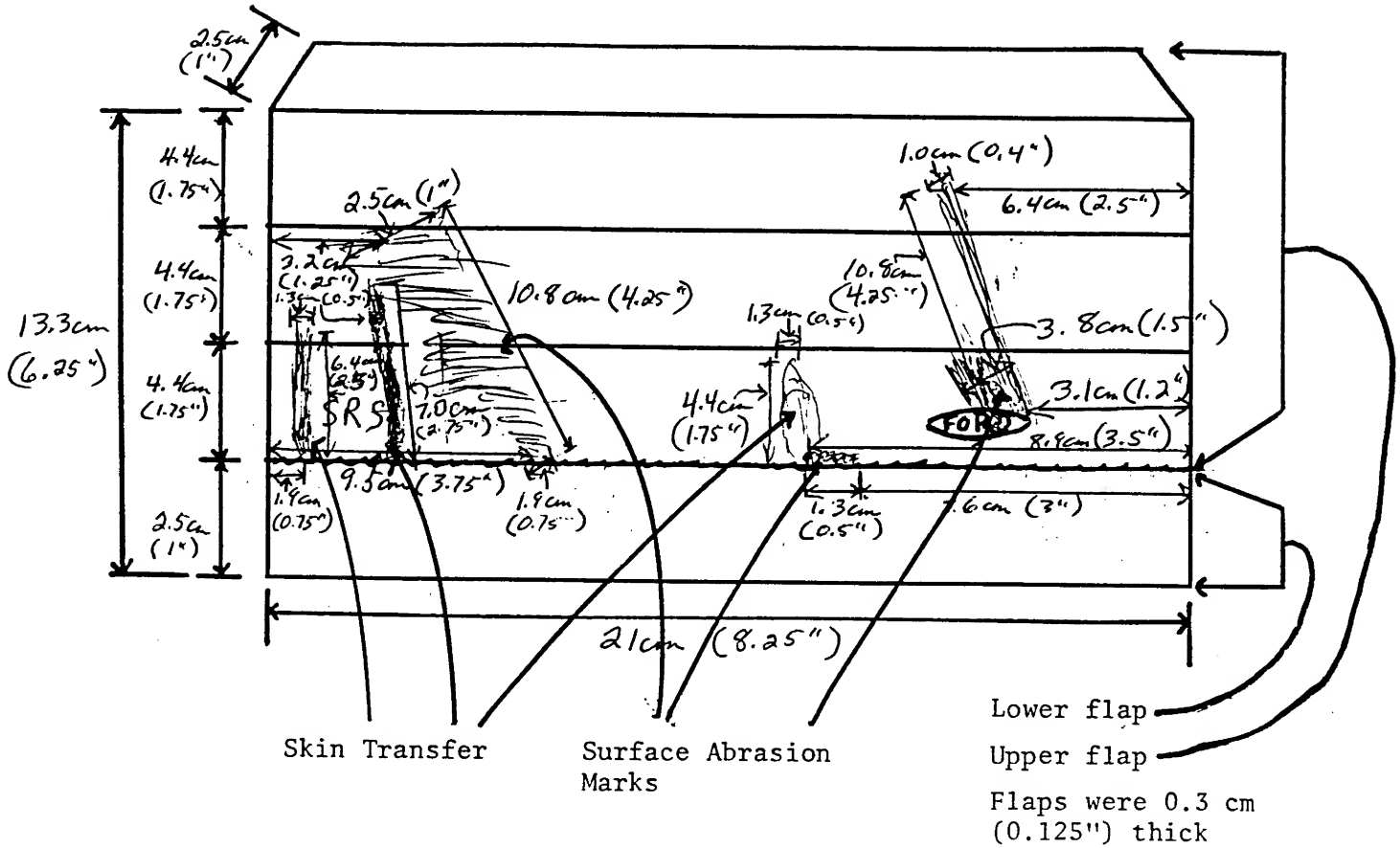
**Front side (driver's side)  
of air bag**



**Reverse (instrument  
panel) side of the  
air bag**



## Vehicle #1 - Air Bag Module Cover



## AUTOMATIC RESTRAINTS

**NOTES:** Encode the data for each applicable front seat position. The attribute for the variables may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

### AIR BAGS

		Left	Right
FIRST	Availability/Function	1	0
	Deployment	1	0
	Failure	1	0

#### Air Bag System Availability/Function

- (0) Not equipped/not available  
(1) Air bag

#### Non-functional

- (2) Air bag disconnected (specify):  
\_\_\_\_\_  
(3) Air bag not reinstalled  
(9) Unknown

#### Air Bag System Deployment

- (0) Not equipped/not available  
(1) Air bag deployed during accident (as a result of impact)  
(2) Air bag deployed inadvertently just prior to accident  
(3) Air bag deployed, accident sequence undetermined  
(4) Nondeployed  
(5) Unknown if deployed  
(6) Air bag deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)  
(9) Unknown

#### Did Air Bag System Fail?

- (0) Not equipped/not available  
(1) No  
(2) Yes (specify):  
\_\_\_\_\_  
(9) Unknown

## AUTOMATIC BELTS

		Left	Right
FIRST	Availability/Function	0	0
	Use	0	0
	Type	0	0
	Proper Use	0	0
	Failure Modes	0	0

#### Automatic (Passive) Belt System Availability/Function

- (0) Not equipped/not available  
(1) 2 point automatic belts  
(2) 3 point automatic belts  
(3) Automatic belts - type unknown

#### Non-functional

- (4) Automatic belts destroyed or rendered inoperative  
(9) Unknown

#### Automatic (Passive) Belt System Use

- (0) Not equipped/not available/destroyed or rendered inoperative  
(1) Automatic belt in use  
(2) Automatic belt not in use (manually disconnected, motorized track inoperative)  
(3) Automatic belt use unknown  
(9) Unknown

#### Automatic (Passive) Belt System Type

- (0) Not equipped/not available  
(1) Non-motorized system  
(2) Motorized system  
(9) Unknown

#### Proper Use of Automatic (Passive) Belt System

- (0) Not equipped/not available/not used  
(1) Automatic belt used properly  
(2) Automatic belt used properly with child safety seat

#### Automatic Belt Used Improperly

- (3) Automatic shoulder belt worn under arm  
(4) Automatic shoulder belt worn behind back  
(5) Automatic belt worn around more than one person  
(6) Lap portion of automatic belt worn on abdomen  
(7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify):  
\_\_\_\_\_  
(8) Other improper use of automatic belt system (specify):  
\_\_\_\_\_  
(9) Unknown

#### Automatic (Passive) Belt Failure Modes During Accident

- (0) Not equipped/not available/not in use  
(1) No automatic belt failure(s)  
(2) Torn webbing (stretched webbing not included)  
(3) Broken buckle or latchplate  
(4) Upper anchorage separated  
(5) Other anchorage separated (specify):  
\_\_\_\_\_  
(6) Broken retractor  
(7) Combination of above (specify):  
\_\_\_\_\_  
(8) Other automatic belt failure (specify):  
\_\_\_\_\_  
(9) Unknown

## MANUAL RESTRAINTS

**NOTES:** Encode the applicable data for each seat position in the vehicle. The attribute for the variable may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

If a Child safety seat is present, encode the data on the back of this page.

If the vehicle has automatic restraints available, encode the appropriate data on the back of the previous page.

		Left	Center	Right
F I R S T	Availability	4	3	4
	Use	00	00	00
	Failure Modes	0	0	0
S E C O N D	Availability	4	3	4
	Use	00	00	00
	Failure Modes	0	0	0
T H I R D	Availability	/		
	Use			
	Failure Modes			
O T H E R	Availability	/		
	Use			
	Failure Modes			

**Manual (Active) Belt System Availability**

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available - type unknown

**Integral Belt Partially Destroyed**

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)

(8) Other belt (specify): \_\_\_\_\_

(9) Unknown

**Manual (Active) Belt System Use**

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperable (specify): \_\_\_\_\_
- (02) Shoulder belt
- (03) Lap belt
- (04) Lap and shoulder belt
- (05) Belt used - type unknown

**(08) Other belt used (specify):**

- (12) Shoulder belt used with child safety seat
- (13) Lap belt used with child safety seat
- (14) Lap and shoulder belt used with child safety seat
- (15) Belt used with child safety seat - type unknown
- (18) Other belt used with child safety seat (specify): \_\_\_\_\_
- (99) Unknown if belt used

**Manual (Active) Belt Failure Modes During Accident**

- (0) No manual belt used or not available
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): \_\_\_\_\_
- (6) Broken retractor
- (7) Combination of above (specify): \_\_\_\_\_
- (8) Other manual belt failure (specify): \_\_\_\_\_
- (9) Unknown

## CHILD SAFETY SEAT FIELD ASSESSMENT

When a child safety seat is present enter the occupant's number in the first row and complete the column below the occupant's number using the codes listed below. Complete a column for each child safety seat present.

<b>Occupant Number</b>						
<b>1. Type of Child Safety Seat</b>						
<b>2. Child Safety Seat Orientation</b>						
<b>3. Child Safety Seat Harness Usage</b>						
<b>4. Child Safety Seat Shield Usage</b>						
<b>5. Child Safety Seat Tether Usage</b>						
<b>6. Child Safety Seat Make/Model</b>	Specify Below for Each Child Safety Seat					

### 1. Type of Child Safety Seat

- (0) No child safety seat
- (1) Infant seat
- (2) Toddler seat
- (3) Convertible seat
- (4) Booster seat
- (7) Other type child safety seat (specify):

- (8) Unknown child safety seat type
- (9) Unknown if child safety seat used

### 2. Child Safety Seat Orientation

- (00) No child safety seat
- Designed for Rear Facing for This Age/Weight
- (01) Rear facing
- (02) Forward facing
- (08) Other orientation (specify):
- (09) Unknown orientation

Designed for Forward Facing for This Age/Weight

- (11) Rear facing
- (12) Forward facing
- (18) Other orientation (specify):

(19) Unknown orientation

Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight

- (21) Rear facing
- (22) Forward facing
- (28) Other orientation (specify):

(29) Unknown orientation

(99) Unknown if child safety seat used

### 3. Child Safety Seat Harness Usage

### 4. Child Safety Seat Shield Usage

- ### 5. Child Safety Seat Tether Usage
- Note: Options Below Are Used for Variables 3-5.
- (00) No child safety seat

Not Designed with Harness/Shield/Tether

- (01) After market harness/shield/tether added, not used

- (02) After market harness/shield/tether used
- (03) Child safety seat used, but no after market harness/shield/tether added
- (09) Unknown if harness/shield/tether added or used

Designed With Harness/Shield/Tether

- (11) Harness/shield/tether not used
- (12) Harness/shield/tether used
- (19) Unknown if harness/shield/tether used

Unknown If Designed With Harness/Shield/Tether

- (21) Harness/shield/tether not used
- (22) Harness/shield/tether used
- (29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used

- ### 6. Child Safety Seat Make/Model
- (Specify make/model and occupant number)

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## HEAD RESTRAINTS/SEAT EVALUATION

**NOTES:** Encode the applicable data for each seat position in the vehicle. The attribute for these variables may be found at the bottom of the page. Head restraint type/damage and seat type/performance should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

		Left	Center	Right
FIRST	Head Restraint Type/Damage	4	0	3
	Seat Type	06	06	06
	Seat Performance	1	1	1
	Seat Orientation	1	1	1
SECOND	Head Restraint Type/Damage	0	0	0
	Seat Type	03	03	03
	Seat Performance	1	1	1
	Seat Orientation	1	1	1
THIRD	Head Restraint Type/Damage			
	Seat Type			
	Seat Performance			
	Seat Orientation			
OTHER	Head Restraint Type/Damage			
	Seat Type			
	Seat Performance			
	Seat Orientation			

## Head Restraint Type/Damage by Occupant at This Occupant Position

- (0) No head restraints
- (1) Integral — no damage
- (2) Integral — damaged during accident
- (3) Adjustable — no damage
- (4) Adjustable — damaged during accident
- (5) Add-on — no damage
- (6) Add-on — damaged during accident
- (8) Other Specify):

(9) Unknown

## Seat Type (this Occupant Position)

- (00) Occupant not seated or no seat
- (01) Bucket
- (02) Bucket with folding back
- (03) Bench
- (04) Bench with separate back cushions
- (05) Bench with folding back(s)
- (06) Split bench with separate back cushions
- (07) Split bench with folding back(s)
- (08) Pedestal (i.e., column supported)
- (09) Other seat type (specify):

- (10) Box mounted seat (i.e., van type)
- (99) Unknown

## Seat Performance (this Occupant Position)

- (0) Occupant not seated or no seat
- (1) No seat performance failure(s)
- (2) Seat adjusters failed
- (3) Seat back folding locks or "seat back" failed specify:
- (4) Seat tracks/anchors failed
- (5) Deformed by impact of occupant
- (6) Deformed by passenger compartment intrusion (specify):

(7) Combination of above (specify):

(8) Other (specify):

(9) Unknown

## Seat Orientation (this Occupant Position)

- (0) Occupant not seated or no seat
- (1) Forward facing seat
- (2) Rear facing seat
- (3) Side facing seat (inward)
- (4) Side facing seat (outward)
- (8) Other (specify):

(9) Unknown

**DESCRIBE ANY INDICATION OF ABNORMAL OCCUPANT POSTURE (I.E., UNUSUAL OCCUPANT CONTACT PATTERN)**

**EJECTION/ENTRAPMENT DATA**

Complete the following if the researcher has any indication that an occupant was either ejected from or entrapped in the vehicle. Code the appropriate data on the Occupant Assessment Form.

**EJECTION** No [☒] Yes [ ]

Describe indications of ejection and body parts involved in partial ejection(s):

---



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Occupant Number						
Ejection						
(Note on Vehicle Interior Sketch) Ejection Area						
Ejection Medium						
Medium Status						

**Ejection**

- (1) Complete ejection  
(1) Partial ejection  
(3) Ejection, Unknown degree  
(9) Unknown

**Ejection Area**

- (1) Windshield  
(2) Left front  
(3) Right front  
(4) Left rear  
(5) Right rear  
(6) Rear

**(7) Roof**

- (8) Other area (e.g., back of pickup, etc.) (specify):

**(9) Unknown****Ejection Medium**

- (1) Door/hatch/tailgate  
(2) Nonfixed roof structure  
(3) Fixed glazing  
(4) Nonfixed glazing (specify):

**(5) Integral structure**

- (8) Other medium (specify):

**(9) Unknown****Medium Status (Immediately Prior to Impact)**

- (1) Open  
(2) Closed  
(3) Integral structure  
(9) Unknown

**ENTRAPMENT** No [☒] Yes [ ]

Describe entrapment mechanism:

---



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Component(s):

(Note in vehicle interior diagram)



# GENERAL VEHICLE FORM

NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number

2. Case Number - Stratum

3. Vehicle Number

## VEHICLE IDENTIFICATION

4. Vehicle Model Year

Code the last two digits of the model year  
(99) Unknown

5. Vehicle Make (specify):

Cadillac  
Applicable codes are found in your  
NASS Data Collection, Coding and  
Editing Manual.  
(99) Unknown

6. Vehicle Model (specify):

Coupe de Ville  
Applicable codes are found in your  
NASS Data Collection, Coding and  
Editing Manual.  
(999) Unknown

7. Body Type

Note: Applicable codes may be found on  
the back of this page.

8. Vehicle Identification Number

6D47RQ [REDACTED]

Left justify; Slash zeros and letter Z (0 and Z)  
No VIN—Code all zeros  
Unknown—Code all nine's

## OFFICIAL RECORDS

9. Police Reported Vehicle Disposition

(0) Not towed due to vehicle damage  
(1) Towed due to vehicle damage  
(9) Unknown

10. Police Reported Travel Speed

Code to the nearest kph (NOTE: 000 means  
less than 0.5 kph)  
(160) 159.5 kph and above  
(999) Unknown

\_\_\_\_ mph X 1.6093 = \_\_\_\_ kph

11. Police Reported Alcohol Presence

(0) No alcohol present  
(1) Yes (alcohol present)  
(7) Not reported  
(8) No driver present  
(9) Unknown

Note: See variables 37 through 55

(Page 4) for information on Other Drugs

12. Alcohol Test Result For Driver

Code actual value (decimal implied  
before first digit—0.xx)  
(95) Test refused  
(96) None given  
(97) AC test performed, results unknown  
(98) No driver present  
(99) Unknown

Source: \_\_\_\_\_

## ACCIDENT RELATED

13. Speed Limit

(000) No statutory limit  
Code posted or statutory speed limit  
in kph  
(999) Unknown

\_\_\_\_ mph X 1.6093 = \_\_\_\_ kph

14. Attempted Avoidance Maneuver

(00) No impact  
(01) No avoidance actions  
(02) Braking (no lockup)  
(03) Braking (lockup)  
(04) Braking (lockup unknown)  
(05) Releasing brakes  
(06) Steering left  
(07) Steering right  
(08) Braking and steering left  
(09) Braking and steering right  
(10) Accelerating  
(11) Accelerating and steering left  
(12) Accelerating and steering right  
(97) No driver present  
(98) Other action (specify):

(99) Unknown

15. Accident Type

Applicable codes may be found on the  
back of page two of this field form  
(00) No impact  
Code the number of the diagram that  
best describes the accident circumstance  
(98) Other accident type (specify):

This vehicle was accelerating  
(99) Unknown

\*\*\*\* SKIP TO VARIABLE GV37 IF GV07 DOES NOT EQUAL 01-49 \*\*\*\*

## National Accident Sampling System-Crashworthiness Data System: General Vehicle Form

Page 2

## OCCUPANT RELATED

16. Driver Presence in Vehicle 1  
 (0) Driver not present  
 (1) Driver present  
 (9) Unknown
17. Number of Occupants This Vehicle 03  
 (00-96) Code actual number of occupants for this vehicle  
 (97) 97 or more  
 (99) Unknown
18. Number of Occupant Forms Submitted 03

## VEHICLE WEIGHT ITEMS

19. Vehicle Curb Weight 2,350  
2347 Code weight to nearest 10 kilograms.  
 (045) Less than 450 kilograms  
 (610) 6,100 kilograms or more  
 (999) Unknown  
5,174 lbs X .4536 = 2,347 kgs  
 Source: \_\_\_\_\_
20. Vehicle Cargo Weight 0,020  
23 Code weight to nearest 10 kilograms.  
 (000) Less than 5 kilograms  
 (450) 4,500 kilograms or more  
 (999) Unknown  
50 lbs X .4536 = 23 kgs

## RECONSTRUCTION DATA

21. Towed Trailing Unit 0  
 (0) No towed unit  
 (1) Yes—towed trailing unit  
 (9) Unknown
22. Documentation of Trajectory Data for This Vehicle 1  
 (0) No  
 (1) Yes
23. Post Collision Condition of Tree or Pole (For Highest Delta V) 0  
 (0) Not collision (for highest delta V) with tree or pole  
 (1) Not damaged  
 (2) Cracked/sheared  
 (3) Tilted <45 degrees  
 (4) Tilted ≥45 degrees  
 (5) Uprooted tree  
 (6) Separated pole from base  
 (7) Pole replaced  
 (8) Other (specify): \_\_\_\_\_  
 (9) Unknown

24. Rollover 0  
 (0) No rollover (no overturning)  
*Rollover (primarily about the longitudinal axis)*  
 (1) Rollover, 1 quarter turn only  
 (2) Rollover, 2 quarter turns  
 (3) Rollover, 3 quarter turns  
 (4) Rollover, 4 or more quarter turns (specify): \_\_\_\_\_  
 (5) Rollover--end-over-end (i.e., primarily about the lateral axis)  
 (9) Rollover (overturn), details unknown

## OVERRIDE/UNDERRIDE (THIS VEHICLE)

25. Front Override/Underride (this Vehicle) 0
26. Rear Override/Underride (this Vehicle) 0  
 (0) No override/underride, or not an end-to-end impact  
*Override (see specific CDC)*  
 (1) 1st CDC  
 (2) 2nd CDC  
 (3) Other not automated CDC (specify): \_\_\_\_\_  
*Underride (see specific CDC)*  
 (4) 1st CDC  
 (5) 2nd CDC  
 (6) Other not automated CDC (specify): \_\_\_\_\_  
 (7) Medium/heavy truck or bus override  
 (9) Unknown

## HEADING ANGLE AT IMPACT FOR HIGHEST DELTA V

Values: (000)-(359) Code actual value  
 (997) Noncollision  
 (998) Impact with object  
 (999) Unknown

27. Heading Angle For This Vehicle 180
28. Heading Angle For Other Vehicle 180

## National Accident Sampling System-Crashworthiness Data System: General Vehicle Form

Page 3

29. Basis for Total Delta V (highest) 2*Delta V Calculated*

- (1) CRASH program—damage only routine
- (2) CRASH program—damage and trajectory routine
- (3) Missing vehicle algorithm

*Delta V Not Calculated*

- (4) At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program, regardless of collision conditions.
- (5) All vehicles within scope (CDC applicable) of CRASH program but one of the collision conditions is beyond the scope of the CRASH program or other acceptable reconstruction technique, regardless of adequacy of damage data.
- (6) All vehicle and collision conditions are within scope of one of the acceptable reconstruction programs, but there is insufficient data available.

## COMPUTER GENERATED DELTA V

30. Total Delta V

Secondary Highest

0 0 88 Nearest kph

(NOTE: 000 means less than  
0.5 kph)  
(160) 159.5 kph and above  
(999) Unknown

31. Longitudinal Component of  
Delta V⊕  
- 0 0 88 Nearest kph

(NOTE: 000 means greater than  
-0.5 kph and less than +0.5 kph)  
(±160) ±159.5 kph and above  
(999) Unknown

32. Lateral Component of Delta V

Secondary Highest

+

- 0 0 00 Nearest kph

(NOTE: 000 means greater than  
-0.5 kph and less than +0.5 kph)  
(±160) ±159.5 kph and above  
(999) Unknown

33. Energy Absorption

0 0 8 . 1 0 08101 Nearest 100 joules

(NOTE: 0000 means less than 50 joules)  
(9997) 999,650 joules or more  
(9999) Unknown

34. Confidence In Reconstruction Program  
Results (For Highest Delta V)

- (0) No reconstruction
- (1) Collision fits model — results appear reasonable
- (2) Collision fits model — results appear high
- (3) Collision fits model — results appear low
- (4) Borderline reconstruction — results appear reasonable

35. Type of Vehicle Inspection

- (0) No inspection
- (1) Complete inspection
- (2) Partial inspection (specify):

36. Is this an AOPS Vehicle?

- (0) No
- (1) Yes - researcher determined
- (2) VIN determined air bag system
- (3) VIN determined automatic (passive) belts
- (4) VIN determined air bag and automatic (passive) belts

IS OLDMISS APPLICABLE FOR THIS VEHICLE? [ ] YES [ ] NO

IF YES: IS A COMPLETED OLDMISS PROGRAM SUMMARY INCLUDED? [ ] YES [ ] NO

## National Accident Sampling System-Crashworthiness Data System: General Vehicle Form

Page 4

37. Police Reported Other Drug Presence 1

- (0) No other drugs present
- (1) Yes (other drug present)
- (7) Not reported
- (8) No driver present
- (9) Unknown

38. Police Reported Drug Evaluation Classification (DEC) Test For Driver 0

- (0) No DEC process available or given
- (1) DEC process given, results known
- (2) DEC process given, results unknown
- (3) DEC process available, unknown if given
- (8) No driver present

39. Other Drug Specimen Test Type For Driver 0

- (0) No specimen test given
- (1) Blood test
- (2) Urine test
- (3) Other specimen tests (specify): \_\_\_\_\_
- (7) Unspecified specimen test
- (8) No driver present
- (9) Unknown if specimen test given

**DRUG EVALUATION CLASSIFICATION  
OTHER DRUGS TEST RESULTS FOR DRIVER**

	DEC Test Results	Specimen Test Results
Narcotic Drug	40. <u>0</u>	41. <u>9</u>
Depressant Drug	42. <u>0</u>	43. <u>9</u>
Stimulant Drug	44. <u>0</u>	45. <u>9</u>
Hallucinogen Drug	46. <u>0</u>	47. <u>9</u>
Cannabinoid Drug	48. <u>0</u>	49. <u>9</u>
Phencyclidine (PCP)	50. <u>0</u>	51. <u>9</u>
Inhalant Drug	52. <u>0</u>	53. <u>9</u>
Other Drug (Excluding Nicotine, Aspirin, Alcohol, Drugs Administered Post-Crash)	54. <u>0</u>	55. <u>9</u>

## Codes For DEC Test Results

- (0) No DEC test given
- (1) Passed DEC test
- (2) Failed DEC test
- (3) DEC test given—results unknown
- (8) No driver present
- (9) Unknown if DEC test given

## Codes for Specimen Test Results

- (0) No specimen test given
- (1) Drug not found in specimen
- (2) Drug found in specimen
- (7) Specimen test given, results unknown or not obtained
- (8) No driver present
- (9) Unknown if specimen test given

## National Accident Sampling System-Crashworthiness Data System: General Vehicle Form

Page 5

## OTHER DATA

## 56. Driver's Zip Code

- (00000) Driver not present  
 (00001) Driver not a resident of U.S. or territories  
       Code actual 5-digit zip code  
 (99999) Unknown

## 57. Driver's Race/Ethnic Origin

- (0) Driver not present  
 (1) White (non-Hispanic)  
 (2) Black (non-Hispanic)  
 (3) White (Hispanic)  
 (4) Black (Hispanic)  
 (5) American Indian, Eskimo or Aleut  
 (6) Asian or Pacific Islander  
 (8) Other (specify):  
 (9) Unknown

## 58. Vehicle Special Use (This Trip)

- (0) No special use  
 (1) Taxi  
 (2) Vehicle used as school bus  
 (3) Vehicle used as other bus  
 (4) Military  
 (5) Police  
 (6) Ambulance  
 (7) Fire truck or car  
 (8) Other (specify):  
 (9) Unknown

## ROLLOVER DATA

If GV07 (Body Type)  $\neq$  1-49, leave GV59-GV63 blank.  
 If GV24 (Rollover) = 0, then GV59-GV63 must equal 0.  
 If GV24 = 9, then GV59-GV63 must equal 9.

## 59. Rollover Initiation Type

- (0) No rollover  
 (1) Trip-over  
 (2) Flip-over  
 (3) Turn-over  
 (4) Climb-over  
 (5) Fall-over  
 (6) Bounce-over  
 (7) Collision with another vehicle  
 (8) Other rollover initiation type specify:  
 (9) Unknown rollover initiation type

## 60. Location of Rollover Initiation

- (0) No rollover  
 (1) On roadway  
 (2) On shoulder—paved  
 (3) On shoulder—unpaved  
 (4) On roadside or divided trafficway median  
 (9) Unknown

## 61. Rollover Initiation Object Contacted

## 62. Location on Vehicle Where Initial Principal Tripping Force Is Applied

- (0) No rollover  
 (1) Wheels/tires  
 (2) Side plane  
 (3) End plane  
 (4) Undercarriage  
 (5) Other location on vehicle (specify):  
 (8) Non-contact rollover forces (specify):  
 (9) Unknown

## 63. Direction of Initial Roll

- (0) No rollover  
 (1) Roll right - primarily about the longitudinal axis  
 (2) Roll left - primarily about the longitudinal axis  
 (5) End-over-end (i.e., primarily about the lateral axis)  
 (9) Unknown roll direction

## PRECRASH DATA

## 64. Pre-Event Movement (Prior to Recognition of Critical Event)

- (01) Going straight  
 (02) Slowing or stopping in traffic lane  
 (03) Starting in traffic lane  
 (04) Stopped in traffic lane  
 (05) Passing or overtaking another vehicle  
 (06) Disabled or parked in travel lane  
 (07) Leaving a parking position  
 (08) Entering a parking position  
 (09) Turning right  
 (10) Turning left  
 (11) Making a U-turn  
 (12) Backing up (other than for parking position)  
 (13) Negotiating a curve  
 (14) Changing lanes  
 (15) Merging  
 (16) Successful avoidance maneuver to a previous critical event  
 (97) Other (specify):  
 (98) No driver present  
 (99) Unknown



## PRECRASH DATA (Continued)

65. Critical Precrash Event 52*This Vehicle Loss of Control Due To:*

- (01) Blow out or flat tire
- (02) Stalled engine
- (03) Disabling vehicle failure (e.g., wheel fell off) (specify): \_\_\_\_\_
- (04) Non-disabling vehicle problem (e.g., hood flew up) (specify): \_\_\_\_\_
- (05) Poor road conditions (puddle, pot hole, ice, etc.) (specify): \_\_\_\_\_
- (06) Traveling too fast for conditions
- (08) Other cause of control loss (specify): \_\_\_\_\_
- (09) Unknown cause of control loss

*This Vehicle Traveling*

- (10) Over the lane line on left side of travel lane
- (11) Over the lane line on right side of travel lane
- (12) Off the edge of the road on the left side
- (13) Off the edge of the road on the right side
- (14) End departure
- (15) Turning left at intersection
- (16) Turning right at intersection
- (17) Crossing over (passing through) intersection
- (19) Unknown travel direction

*Other Motor Vehicle In Lane*

- (50) Stopped
- (51) Traveling in same direction with lower speed (i.e., lower steady speed or decelerating)
- (52) Traveling in same direction with higher speed
- (53) Traveling in opposite direction
- (54) In crossover
- (55) Backing
- (59) Unknown travel direction of other motor vehicle in lane

*Other Motor Vehicle Encroaching Into Lane*

- (60) From adjacent lane (same direction)—over left lane line
- (61) From adjacent lane (same direction)—over right lane line
- (62) From opposite direction—over left lane line
- (63) From opposite direction—over right lane line
- (64) From parking lane
- (65) From crossing street, turning into same direction
- (66) From crossing street, across path
- (67) From crossing street, turning into opposite direction
- (68) From crossing street, intended path not known
- (70) From driveway, turning into same direction
- (71) From driveway, across path
- (72) From driveway, turning into opposite direction
- (73) From driveway, intended path not known
- (74) From entrance to limited access highway
- (78) Encroachment by other vehicle—details unknown

*Pedestrian or Pedalcyclist, or Other Nonmotorist*

- (80) Pedestrian in roadway
- (81) Pedestrian approaching roadway
- (82) Pedestrian - unknown location
- (83) Pedalcyclist or other nonmotorist in roadway (specify): \_\_\_\_\_
- (84) Pedalcyclist or other nonmotorist approaching roadway (specify): \_\_\_\_\_
- (85) Pedalcyclist or other nonmotorist—unknown location (specify): \_\_\_\_\_

*Object or Animal*

- (87) Animal in roadway
- (88) Animal approaching roadway
- (89) Animal—unknown location
- (90) Object in roadway
- (91) Object approaching roadway
- (92) Object—unknown location

(98) Other critical precrash event (specify): \_\_\_\_\_

(99) Unknown

For Corrective Actions Attempted see variable GV14 (Attempted Avoidance Manuever)

66. Precrash Stability After Avoidance Maneuver 0

- (0) No avoidance maneuver
- (1) Tracking
- (2) Skidding longitudinally—rotation less than 30 degrees
- (3) Skidding laterally—clockwise rotation
- (4) Skidding laterally—counterclockwise rotation
- (7) Other vehicle loss-of-control (specify): \_\_\_\_\_
- (8) No driver present
- (9) Precrash stability unknown

67. Precrash Directional Consequences of Avoidance Maneuver (Corrective Action) 0

- (0) No avoidance maneuver
- (1) Vehicle stayed in travel lane where avoidance maneuver was initiated
- (2) Vehicle stayed on roadway but left travel lane where avoidance maneuver was initiated
- (3) Vehicle stayed on roadway, not known if left travel lane where avoidance maneuver was initiated
- (4) Vehicle departed roadway
- (5) Avoidance maneuver initiated off roadway
- (8) No driver present
- (9) Directional consequences unknown

\*\*\* IF THE CDS APPLICABLE VEHICLE WAS NOT INSPECTED (I.E., GV35 = 0), \*\*\*  
DO NOT COMPLETE THE EXTERIOR AND INTERIOR VEHICLE FORMS.

\*\*\* IF GV07 DOES NOT EQUAL 01-49, DO NOT COMPLETE \*\*\*  
THE EXTERIOR VEHICLE, INTERIOR VEHICLE,  
OCCUPANT ASSESSMENT, AND OCCUPANT INJURY FORMS.

## EXTERIOR VEHICLE FORM

**NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM**

1. Primary Sampling Unit Number		3. Vehicle Number	
2. Case Number - Stratum			

## VEHICLE IDENTIFICATION

VIN 6 D 4 7 R 4 Q \_\_\_\_\_ Model Year 7 4  
Vehicle Make (specify): Cadillac \_\_\_\_\_ Vehicle Model (specify): Coupe de Ville

## LOCATOR

Locate the end of the damage with respect to the vehicle longitudinal center line or bumper corner for end impacts or an undamaged axle for side impacts.

Specific Impact No.	Location of Direct Damage	Location of Field L
1	Begins at 4 & extends to (12) bumper corner	Entire.
2	Right bumper corner	

### CRUSH PROFILE IN CENTIMETERS

NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).

**Measure and document on the vehicle diagram the location of maximum crush.**

**Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.**

Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.

**Use as many lines/columns as necessary to describe each damage profile.**

[illegible]

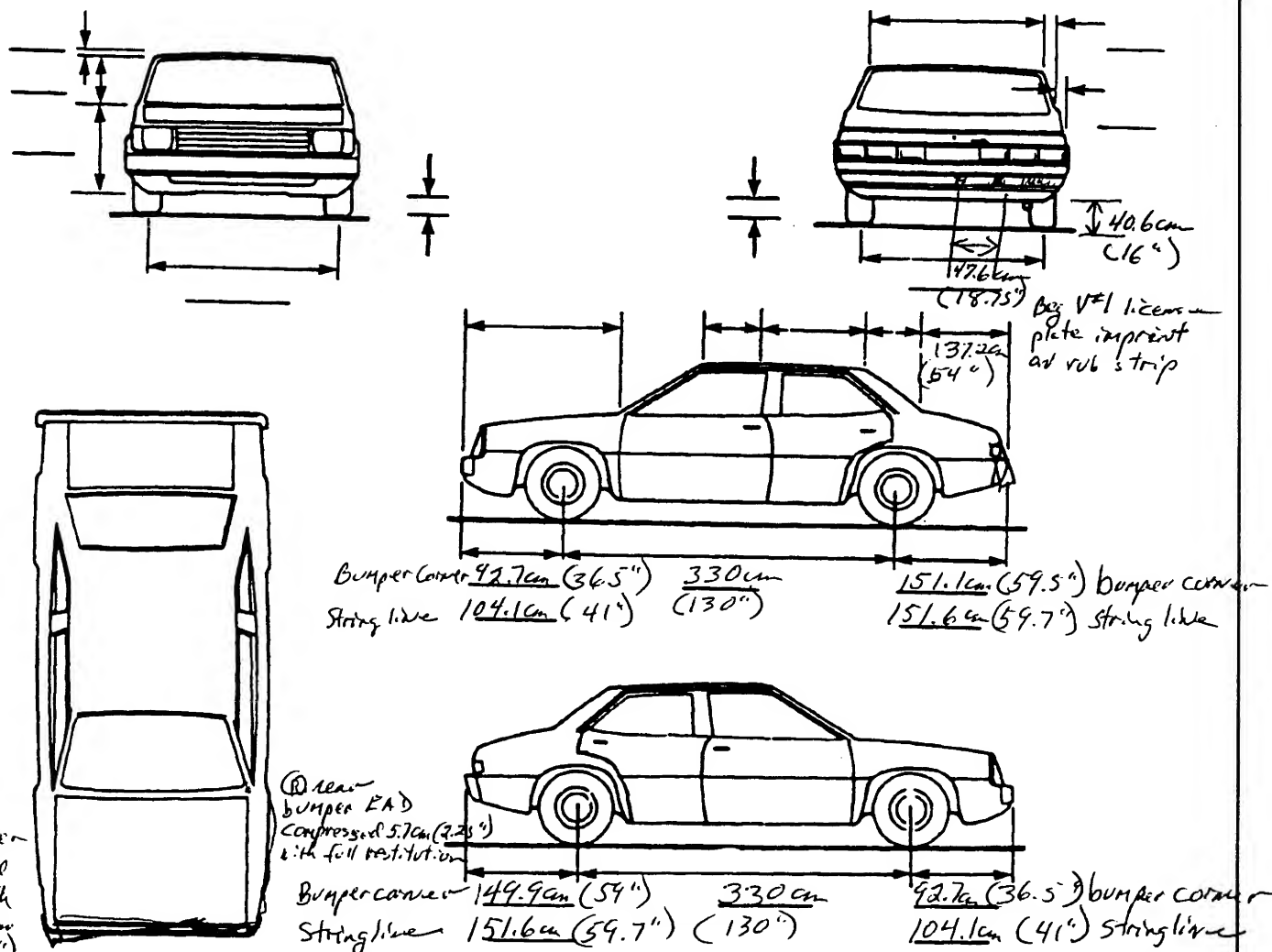
# ORIGINAL SPECIFICATIONS WORK SHEET

Wheelbase	<u>130.0</u> inches	x 2.54 =	<u>330</u> cm
Overall Length	<u>230.7</u> inches	x 2.54 =	<u>586</u> cm
Maximum Width	<u>29.8</u> inches	x 2.54 =	<u>203</u> cm
Curb Weight	<u>5,174</u> pounds	x .4536 =	<u>2,347</u> kg
Average Track	<u>63.3</u> inches	x 2.54 =	<u>161</u> cm
Front Overhang	<u>41.0</u> inches	x 2.54 =	<u>104</u> cm
Rear Overhang	<u>59.7</u> inches	x 2.54 =	<u>152</u> cm
Undeformed End Width	<u>68.5</u> inches	x 2.54 =	<u>174</u> cm
Engine Size: cyl./displ.	<u>    </u> cc	x .001 =	<u>    </u> L
	<u>472</u> CID	x .0164 =	<u>7.7</u> L

## VEHICLE DAMAGE SKETCH

<b>TIRE—WHEEL DAMAGE</b> a. Rotation physically restricted    b. Tire deflated RF <u>2</u> RF <u>2</u> LF <u>2</u> LF <u>2</u> RR <u>2</u> RR <u>2</u> LR <u>2</u> LR <u>2</u> (1) Yes (2) No (8) NA (9) Unk.		<b>ORIGINAL SPECIFICATIONS</b> Wheelbase <u>330 (130")</u> cm Overall Length <u>586 (230.7")</u> cm Maximum Width <u>203 (79.8")</u> cm Curb Weight <u>2,347 (5,174 lb)</u> kg Average Track <u>161 (63.3")</u> cm Front Overhang <u>104 (41.0")</u> cm Rear Overhang <u>152 (59.7")</u> cm Undeformed End Width <u>174 (68.5")</u> cm Engine Size: cyl./displ. <u>8 cyl 7.7L (472 cu in)</u>		<b>WHEEL STEER ANGLES</b> (For locked front wheels or displaced rear axles only) RF ± <u>      </u> ° LF ± <u>      </u> ° RR ± <u>      </u> ° LR ± <u>      </u> ° Within ± 5 degrees
<b>TYPE OF TRANSMISSION</b> <input type="checkbox"/> Manual <input checked="" type="checkbox"/> Automatic		<b>DRIVE WHEELS</b> <input type="checkbox"/> FWD <input checked="" type="checkbox"/> RWD <input type="checkbox"/> 4WD		
		Approximate Cargo Weight <u>23 (50 lb)</u> kg		

## MEASUREMENTS IN CENTIMETERS



## NOTES:

Sketch new perimeter and cross hatch direct damage and single hatch induced damage on all views. Annotate observations which might be useful in reconstructing the accident (e.g., grass in tire bead, direction of striations, scuff on sidewalls, etc.). If pulling trailer, sketch type of trailer and damage received on the back of this page.

Annotate any damage caused by extrication such as component removal by torching, prying, or hydraulic shears.

## CDC WORKSHEET

## CODES FOR OBJECT CONTACTED

(01-30) — Vehicle Number

## Noncollision

(31) Overturn — rollover

(32) Fire or explosion

(33) Jackknife

(34) Other intraunit damage (specify):

(35) Noncollision injury

(38) Other noncollision (specify):

(39) Noncollision — details unknown

## Collision With Fixed Object

(41) Tree ( $\leq 10$  cm in diameter)(42) Tree ( $> 10$  cm in diameter)

(43) Shrubbery or bush

(44) Embankment

(45) Breakaway pole or post (any diameter)

## Nonbreakaway Pole or Post

(50) Pole or post ( $\leq 10$  cm in diameter)(51) Pole or post ( $> 10$  cm but  $\leq 30$  cm in diameter)(52) Pole or post ( $> 30$  cm in diameter)

(53) Pole or post (diameter unknown)

(54) Concrete traffic barrier

(55) Impact attenuator

(56) Other traffic barrier (includes guardrail) (specify):

(57) Fence

(58) Wall

(59) Building

(60) Ditch or culvert

(61) Ground

(62) Fire hydrant

(63) Curb

(64) Bridge

(68) Other fixed object (specify):

(69) Unknown fixed object

## Collision with Nonfixed Object

(71) Motor vehicle not in-transport

(72) Pedestrian

(73) Cyclist or cycle

(74) Other nonmotorist or conveyance

(75) Vehicle occupant

(76) Animal

(77) Train

(78) Trailer, disconnected in transport

(88) Other nonfixed object (specify):

(89) Unknown nonfixed object

(98) Other event (specify):

(99) Unknown event or object

## DEFORMATION CLASSIFICATION BY EVENT NUMBER

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force (degrees)	Incremental Value of Shift	(3) Deformation Location	(4) Specific Longitudinal or Lateral Location	(5) Specific Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
01	01	180	00	B	Z	E	W	01
02	01	180	00	B	R	L	S	01
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—

## COLLISION DEFORMATION CLASSIFICATION

## HIGHEST DELTA "V"

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force	(3) Deformation Location	(4) Longitudinal or Lateral Location	(5) Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
4. <u>01</u>	5. <u>01</u>	6. <u>06</u>	7. <u>B</u>	8. <u>Z</u>	9. <u>E</u>	10. <u>W</u>	11. <u>01</u>

## Second Highest Delta "V"

12. <u>02</u>	13. <u>01</u>	14. <u>06</u>	15. <u>B</u>	16. <u>R</u>	17. <u>L</u>	18. <u>S</u>	19. <u>01</u>
---------------	---------------	---------------	--------------	--------------	--------------	--------------	---------------

## CRUSH PROFILE IN CENTIMETERS

The crush profile for the damage described in the CDC(s) above should be documented in the appropriate space below. (ALL MEASUREMENTS ARE IN CENTIMETERS.)

## HIGHEST DELTA "V"

20. <u>L</u>	21. <u>C<sub>1</sub></u>	<u>C<sub>2</sub></u>	<u>C<sub>3</sub></u>	<u>C<sub>4</sub></u>	<u>C<sub>5</sub></u>	<u>C<sub>6</sub></u>	22. <u>±D</u>
<u>174</u>	<u>001</u>	<u>002</u>	<u>003</u>	<u>004</u>	<u>005</u>	<u>002</u>	<u>⊕ - 044</u>

## Second Highest Delta "V"

23. <u>L</u>	24. <u>C<sub>1</sub></u>	<u>C<sub>2</sub></u>	<u>C<sub>3</sub></u>	<u>C<sub>4</sub></u>	<u>C<sub>5</sub></u>	<u>C<sub>6</sub></u>	25. <u>±D</u>
<u>003</u>	<u>000</u>	<u>000</u>	_____	_____	_____	_____	<u>⊕ - 086</u>

26. Are CDCs Documented but Not Coded on The Automated File? 0  
(0) No  
(1) Yes

27. Researcher's Assessment of Vehicle Disposition 0  
(0) Not towed due to vehicle damage  
(1) Towed due to vehicle damage  
(9) Unknown

28. Original Wheelbase 330  
Code to the nearest centimeter  
(999) Unknown

\_\_\_\_\_ inches X 2.54 = \_\_\_\_\_ centimeters

29. Is This A Multi-Stage Manufactured Vehicle  
And/Or A Certified Altered Vehicle? 0

(0) No post manufacturer modifications

(1) Yes - post manufacturer modifications  
(specify): \_\_\_\_\_

\_\_\_\_\_  
(Include photograph of CERTIFICATION  
PLACARD in case report)

(9) Unknown if vehicle is modified

30. Fire Occurrence 0

(0) No fire

Yes, fire occurred

(1) Minor

(2) Major

(9) Unknown

31. Origin of Fire 0

(0) No fire

(1) Vehicle exterior (front, side, back, top)

(2) Exhaust system

(3) Fuel tank (and other fuel retention  
system parts)

(4) Engine compartment

(5) Cargo/trunk compartment

(6) Instrument panel

(7) Passenger compartment area

(8) Other location (specify): \_\_\_\_\_

(9) Unknown

32. Type of Fuel Tank 0

(0) No fuel tank (electrical vehicle)

(1) Metallic

(2) Non-metallic

(9) Unknown

\*\*\* STOP: IF THE CDS APPLICABLE VEHICLE WAS NOT TOWED AND WAS NOT AN AOPS \*\*\*  
(I.E., GV09=0 OR 9 AND GV36=0), DO NOT COMPLETE THE INTERIOR VEHICLE FORM.





## INTERIOR VEHICLE FORM

1. Primary Sampling Unit Number

2. Case Number - Stratum

93-9

3. Vehicle Number

02

### INTEGRITY

4. Passenger Compartment Integrity 00  
(00) No integrity loss

Yes, Integrity Was Lost Through

- (01) Windshield
- (02) Door (side)
- (03) Door/hatch (back door)
- (04) Roof
- (05) Roof glass
- (06) Side window
- (07) Rear window (backlight)
- (08) Roof and roof glass
- (09) Windshield and door (side)
- (10) Windshield and roof
- (11) Side and rear window (side window and backlight)
- (12) Windshield and side window
- (13) Door and side window
- (98) Other combination of above (specify):  
\_\_\_\_\_
- (99) Unknown

### Door, Tailgate or Hatch Opening

5. LF 0 6. RF 0 7. LR 8 8. RR 8 9. TG/H 8

- (0) No door/gate/hatch
- (1) Door/gate/hatch remained closed and operational
- (2) Door/gate/hatch came open during collision
- (3) Door/gate/hatch jammed shut
- (8) Other (specify):  
\_\_\_\_\_
- (9) Unknown

### Damage/Failure Associated with Door, Tailgate or Hatch Opening in Collision. If IV05-IV09 $\neq$ 2, Then code 0

10. LF 0 11. RF 0 12. LR 0 13. RR 0 14. TG/H 0

- (0) No door/gate/hatch or door not opened

Door, Tailgate or Hatch Came Open During Collision

- (1) Door operational (no damage)
- (2) Latch/striker failure due to damage
- (3) Hinge failure due to damage
- (4) Door structure failure due to damage
- (5) Door support (i.e., pillar, sill, roof side rail, etc.) failure due to damage
- (6) Latch/striker and hinge failure due to damage
- (8) Other failure (specify):  
\_\_\_\_\_
- (9) Unknown

### GLAZING

#### Glazing Damage from Impact Forces

15. WS 0 16. LF 0 17. RF 0 18. LR 0 19. RR 0  
20. BL 0 21. Roof 8 22. Other 8

- (0) No glazing damage from impact forces
- (2) Glazing in place and cracked from impact forces
- (3) Glazing in place and holed from impact forces
- (4) Glazing out-of-place (cracked or not) and not holed from impact forces
- (5) Glazing out-of-place and holed from impact forces
- (6) Glazing disintegrated from impact forces
- (7) Glazing removed prior to accident
- (8) No glazing
- (9) Unknown if damaged

#### Glazing Damage from Occupant Contact

23. WS 0 24. LF 0 25. RF 0 26. LR 0 27. RR 0  
28. BL 0 29. Roof 0 30. Other 0

- (0) No occupant contact to glazing or no glazing
- (1) Glazing contacted by occupant but no glazing damage
- (2) Glazing in place and cracked by occupant contact
- (3) Glazing in place and holed by occupant contact
- (4) Glazing out-of-place (cracked or not) by occupant contact and not holed by occupant contact
- (5) Glazing out-of-place by occupant contact and holed by occupant contact
- (6) Glazing disintegrated by occupant contact
- (9) Unknown if contacted by occupant

If No Glazing Damage *And* No Occupant Contact or No Glazing, Then Code IV31 Through IV46 As 0

#### Type of Window/Windshield Glazing

31. WS 0 32. LF 0 33. RF 0 34. LR 0 35. RR 0  
36. BL 0 37. Roof 0 38. Other 0

- (0) No glazing contact and no damage, or no glazing
- (1) AS-1 - Laminated
- (2) AS-2 - Tempered
- (3) AS-3 - Tempered-tinted
- (4) AS-14 - Glass/Plastic
- (8) Other (specify):  
\_\_\_\_\_
- (9) Unknown

#### Window Precrash Glazing Status

39. WS 0 40. LF 0 41. RF 0 42. LR 0 43. RR 0  
44. BL 0 45. Roof 0 46. Other 0

- (0) No glazing contact and no damage, or no glazing
- (1) Fixed
- (2) Closed
- (3) Partially opened
- (4) Fully opened
- (9) Unknown

## OCCUPANT AREA INTRUSION

Note: If no intrusions, leave variables IV47-IV86 blank.

## INTRUDING COMPONENT

Location of  
IntrusionIntruding  
ComponentMagnitude  
of IntrusionDominant  
Crush  
Direction

## Interior Components

- (01) Steering assembly  
 (02) Instrument panel left  
 (03) Instrument panel center  
 (04) Instrument panel right  
 (05) Toe pan  
 (06) A (A1/A2)-pillar  
 (07) B-pillar  
 (08) C-pillar  
 (09) D-pillar  
 (10) Door panel (side)  
 (12) Roof (or convertible top)  
 (13) Roof side rail  
 (14) Windshield  
 (15) Windshield header  
 (16) Window frame  
 (17) Floor pan (includes sill)  
 (18) Backlight header  
 (19) Front seat back  
 (20) Second seat back  
 (21) Third seat back  
 (22) Fourth seat back  
 (23) Fifth seat back  
 (24) Seat cushion  
 (25) Back door/panel (e.g., tailgate)  
 (26) Other interior component (specify):

- (27) Side panel - forward of the A (A2)-pillar  
 (28) Side panel - rear of the A (A2)-pillar

## Exterior Components

- (30) Hood  
 (31) Outside surface of this vehicle (specify):  
 (32) Other exterior object in the environment (specify):  
 (33) Unknown exterior object  
 (97) Catastrophic  
 (98) Intrusion of unlisted component(s) (specify):  
 (99) Unknown

## LOCATION OF INTRUSION

## Front Seat

- (11) Left  
 (12) Middle  
 (13) Right

## Fourth Seat

- (41) Left  
 (42) Middle  
 (43) Right

## Second Seat

- (21) Left  
 (22) Middle  
 (23) Right

- (97) Catastrophic  
 (98) Other enclosed area (specify)

(99) Unknown

## Third Seat

- (31) Left  
 (32) Middle  
 (33) Right

## MAGNITUDE OF INTRUSION

- (1)  $\geq 3$  centimeters but  $< 8$  centimeters  
 (2)  $\geq 8$  centimeters but  $< 15$  centimeters  
 (3)  $\geq 15$  centimeters but  $< 30$  centimeters  
 (4)  $\geq 30$  centimeters but  $< 46$  centimeters  
 (5)  $\geq 46$  centimeters but  $< 61$  centimeters  
 (6)  $\geq 61$  centimeters  
 (7) Catastrophic  
 (9) Unknown

## DOMINANT CRUSH DIRECTION

- (1) Vertical  
 (2) Longitudinal  
 (3) Lateral  
 (7) Catastrophic  
 (9) Unknown

**STEERING COLUMN**

## 87. Steering Column Type

- (1) Fixed column  
 (2) Tilt column  
 (3) Telescoping column  
 (4) Tilt and telescoping column  
 (8) Other column type (specify):

(9) Unknown

## 88. Blank

(This variable is left blank so that numbering consistency can be maintained with the 1988-93 CDS.

## 89. Blank

(This variable is left blank so that numbering consistency can be maintained with the 1988-93 CDS.

## 90. Blank

(This variable is left blank so that numbering consistency can be maintained with the 1988-93 CDS.

## 91. Blank

(This variable is left blank so that numbering consistency can be maintained with the 1988-93 CDS.

## 92. Steering Rim/Spoke Deformation

- Code actual measured deformation to the nearest centimeter  
 (00) No steering rim deformation  
 (01-14) Actual measured value in centimeters  
 (15) 15 centimeters or more  
 (98) Observed deformation cannot be measured  
 (99) Unknown

## 93. Location of Steering Rim/Spoke Deformation

(00) No steering rim deformation

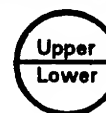
## Quarter Sections

- (01) Section A  
 (02) Section B  
 (03) Section C  
 (04) Section D



## Half Sections

- (05) Upper half of rim/spoke  
 (06) Lower half of rim/spoke  
 (07) Left half of rim/spoke  
 (08) Right half of rim/spoke



- (09) Complete steering wheel collapse  
 (10) Undetermined location  
 (99) Unknown

**INSTRUMENT PANEL**

## 94. Odometer Reading

161,000

kilometers—Code to the nearest 1,000 kilometers

- (000) No odometer  
 (001) Less than 1,500 kilometers  
 (500) 499,500 kilometers or more  
 (999) Unknown

100,201 miles  $\times 1.6093 =$  161,253 kilometers

Source: \_\_\_\_\_

## 95. Instrument Panel Damage from Occupant Contact?

- (0) No  
 (1) Yes  
 (9) Unknown

## 96. Knee Bolsters Deformed from Occupant Contact?

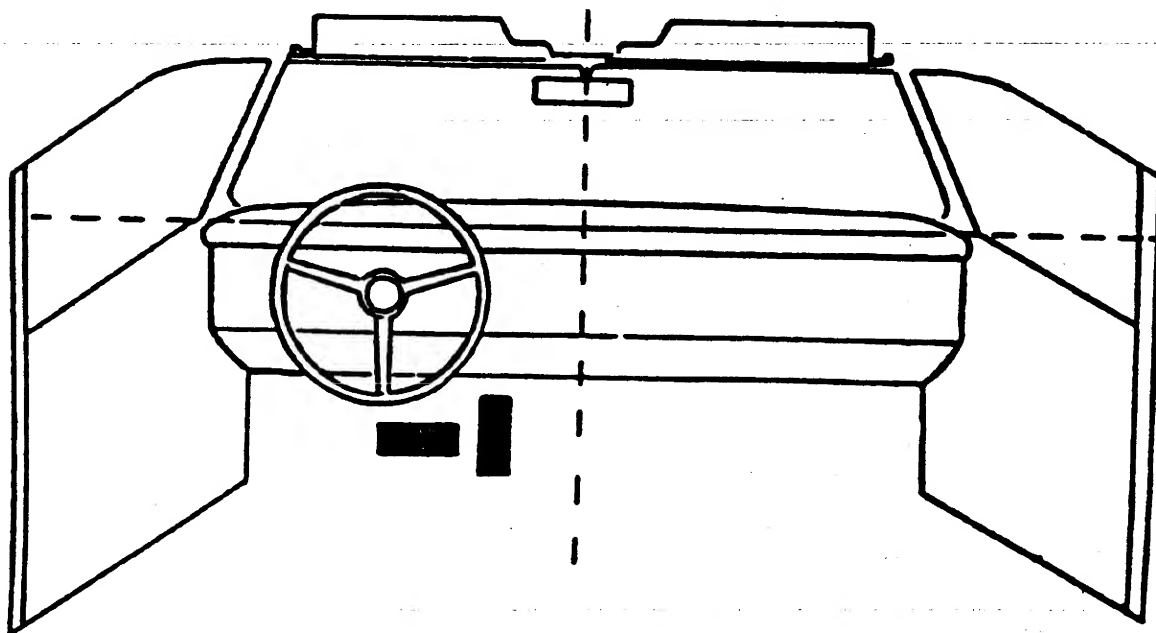
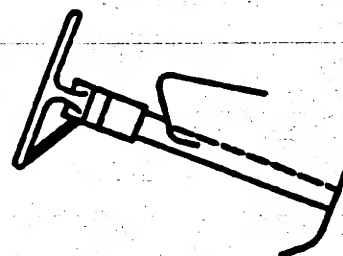
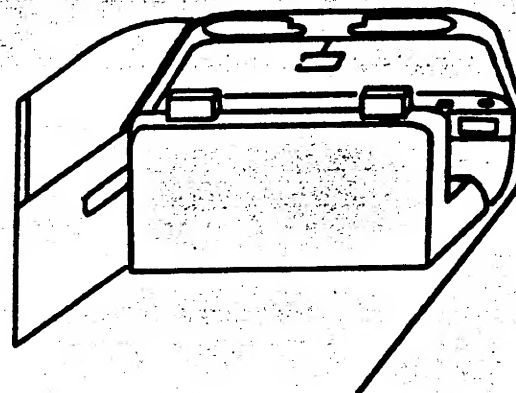
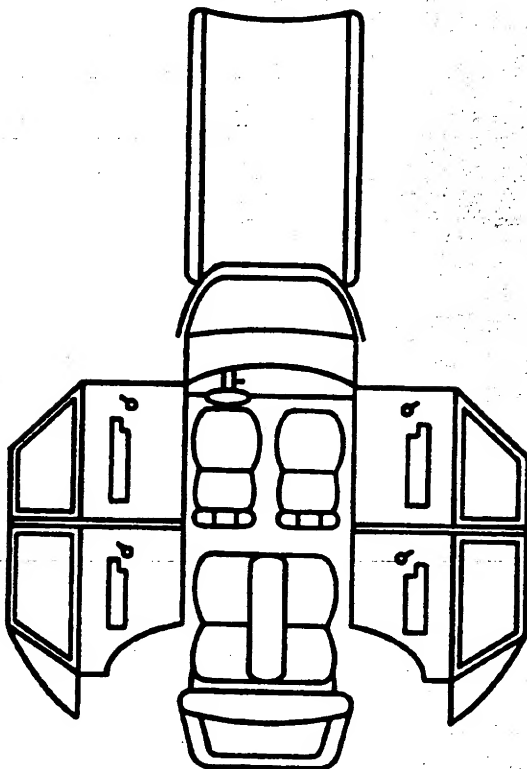
- (0) No  
 (1) Yes  
 (8) Not present  
 (9) Unknown

## 97. Did Glove Compartment Door Open During Collision(s)?

- (0) No  
 (1) Yes  
 (8) Not present  
 (9) Unknown

## VEHICLE INTERIOR SKETCHES

Note area of ejection/entrapment

*No visible contact points*

Sketch windshield contact(s) and the damaged area(s) on the instrument panel outline (e.g., radio, glove compartment, damage to instrument panel structure).

Cross hatch contact points, draw spider webs or use other annotation as may be appropriate.

Annotate the contacted area with a letter (begin with A) and list on the Points of Occupant Contact page.

## POINTS OF OCCUPANT CONTACT

Contact	Interior Component Contacted	Occupant No. If Known	Body Region If Known	Supporting Physical Evidence	Confidence Level of Contact Point
A	No visible contacts				
B					
C					
D					
E					
F					
G					
H					
I					
J					
K					
L					
M					
N					

## CODES FOR INTERIOR COMPONENTS

## FRONT

- (01) Windshield
- (02) Mirror
- (03) Sunvisor
- (04) Steering wheel rim
- (05) Steering wheel hub/spoke
- (06) Steering wheel (combination of codes 04 and 05)
- (07) Steering column, transmission selector lever, other attachment
- (08) Add on equipment (e.g., CB, tape deck, air conditioner)
- (09) Left instrument panel and below
- (10) Center instrument panel and below
- (11) Right instrument panel and below
- (12) Glove compartment door
- (13) Knee bolster
- (14) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (15) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
- (16) Driver side air bag compartment cover
- (17) Passenger side air bag compartment cover
- (18) Windshield reinforced by exterior object (specify): \_\_\_\_\_
- (19) Other front object (specify): \_\_\_\_\_

## LEFT SIDE

- (20) Left side interior surface, excluding hardware or armrests
- (21) Left side hardware or armrest
- (22) Left A (A1/A2)-pillar

- (23) Left B-pillar
- (24) Other left pillar (specify): \_\_\_\_\_
- (25) Left side window glass or frame
- (26) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (27) Other left side object (specify): \_\_\_\_\_

## RIGHT SIDE

- (28) Left side window sill
- (30) Right side interior surface, excluding hardware or armrests
- (31) Right side hardware or armrest
- (32) Right A (A1/A2)-pillar
- (33) Right B-pillar
- (34) Other right pillar (specify): \_\_\_\_\_
- (35) Right side window glass or frame
- (36) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B pillar, or roof side rail.
- (37) Other right side object (specify): \_\_\_\_\_
- (38) Right side window sill

## INTERIOR

- (40) Seat, back support
- (41) Belt restraint webbing/buckle
- (42) Belt restraint B-pillar attachment point
- (43) Other restraint system component (specify): \_\_\_\_\_
- (44) Head restraint system
- (45) Air bag (use codes "16" and "17" for injuries sustained from air bag compartment covers)

- (46) Other occupants (specify): \_\_\_\_\_

- (47) Interior loose objects
- (48) Child safety seat (specify): \_\_\_\_\_

- (49) Other interior object (specify): \_\_\_\_\_

## ROOF

- (50) Front header
- (51) Rear header
- (52) Roof left side rail
- (53) Roof right side rail
- (54) Roof or convertible top

## FLOOR

- (56) Floor (including toe pan)
- (57) Floor or console mounted transmission lever, including console
- (58) Parking brake handle
- (59) Foot controls including parking brake

## REAR

- (60) Backlight (rear window)
- (61) Backlight storage rack, door, etc.
- (62) Other rear object (specify): \_\_\_\_\_

## CONFIDENCE LEVEL OF CONTACT POINT

- (1) Certain
- (2) Probable
- (3) Possible
- (9) Unknown

## AUTOMATIC RESTRAINTS

**NOTES:** Encode the data for each applicable front seat position. The attribute for the variables may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

### AIR BAGS

		Left	Right
F I R S T	Availability/Function	0	0
	Deployment	0	0
	Failure	0	0

#### Air Bag System Availability/Function

- (0) Not equipped/not available  
(1) Air bag

#### Non-functional

- (2) Air bag disconnected (specify):  
\_\_\_\_\_  
(3) Air bag not reinstalled  
(9) Unknown

#### Air Bag System Deployment

- (0) Not equipped/not available  
(1) Air bag deployed during accident (as a result of impact)  
(2) Air bag deployed inadvertently just prior to accident  
(3) Air bag deployed, accident sequence undetermined  
(4) Nondeployed  
(5) Unknown if deployed  
(6) Air bag deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)  
(9) Unknown

#### Did Air Bag System Fail?

- (0) Not equipped/not available  
(1) No  
(2) Yes (specify):  
\_\_\_\_\_  
(9) Unknown

## AUTOMATIC BELTS

		Left	Right
F I R S T	Availability/Function	0	0
	Use	0	0
	Type	0	0
	Proper Use	0	0
	Failure Modes	0	0

#### Automatic (Passive) Belt System Availability/Function

- (0) Not equipped/not available  
(1) 2 point automatic belts  
(2) 3 point automatic belts  
(3) Automatic belts - type unknown

#### Non-functional

- (4) Automatic belts destroyed or rendered inoperative  
(9) Unknown

#### Automatic (Passive) Belt System Use

- (0) Not equipped/not available/destroyed or rendered inoperative  
(1) Automatic belt in use  
(2) Automatic belt not in use (manually disconnected, motorized track inoperative)  
(3) Automatic belt use unknown  
(9) Unknown

#### Automatic (Passive) Belt System Type

- (0) Not equipped/not available  
(1) Non-motorized system  
(2) Motorized system  
(9) Unknown

#### Proper Use of Automatic (Passive) Belt System

- (0) Not equipped/not available/not used  
(1) Automatic belt used properly  
(2) Automatic belt used properly with child safety seat

#### Automatic Belt Used Improperly

- (3) Automatic shoulder belt worn under arm  
(4) Automatic shoulder belt worn behind back  
(5) Automatic belt worn around more than one person  
(6) Lap portion of automatic belt worn on abdomen  
(7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify):  
\_\_\_\_\_  
(8) Other improper use of automatic belt system (specify):  
\_\_\_\_\_  
(9) Unknown

#### Automatic (Passive) Belt Failure Modes During Accident

- (0) Not equipped/not available/not in use  
(1) No automatic belt failure(s)  
(2) Torn webbing (stretched webbing not included)  
(3) Broken buckle or latchplate  
(4) Upper anchorage separated  
(5) Other anchorage separated (specify):  
\_\_\_\_\_  
(6) Broken retractor  
(7) Combination of above (specify):  
\_\_\_\_\_  
(8) Other automatic belt failure (specify):  
\_\_\_\_\_  
(9) Unknown



## MANUAL RESTRAINTS

**NOTES:** Encode the applicable data for each seat position in the vehicle. The attribute for the variable may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

If a Child safety seat is present, encode the data on the back of this page.

If the vehicle has automatic restraints available, encode the appropriate data on the back of the previous page.

		Left	Center	Right
FIRST	Availability	4	3	4
	Use	0	0	0
	Failure Modes	0	0	0
SECOND	Availability	3	3	3
	Use	0	0	0
	Failure Modes	0	0	0
THIRD	Availability	/	/	/
	Use			
	Failure Modes			
OTHER	Availability	/	/	/
	Use			
	Failure Modes			

**Manual (Active) Belt System Availability**

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available - type unknown

**Integral Belt Partially Destroyed**

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)

(8) Other belt (specify): \_\_\_\_\_

(9) Unknown

**Manual (Active) Belt System Use**

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperable (specify): \_\_\_\_\_
- (02) Shoulder belt
- (03) Lap belt
- (04) Lap and shoulder belt
- (05) Belt used - type unknown

**(08) Other belt used (specify):**

- (12) Shoulder belt used with child safety seat
- (13) Lap belt used with child safety seat
- (14) Lap and shoulder belt used with child safety seat
- (15) Belt used with child safety seat - type unknown
- (18) Other belt used with child safety seat (specify): \_\_\_\_\_
- (99) Unknown if belt used

**Manual (Active) Belt Failure Modes During Accident**

- (0) No manual belt used or not available
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): \_\_\_\_\_
- (6) Broken retractor
- (7) Combination of above (specify): \_\_\_\_\_
- (8) Other manual belt failure (specify): \_\_\_\_\_
- (9) Unknown



## CHILD SAFETY SEAT FIELD ASSESSMENT

When a child safety seat is present enter the occupant's number in the first row and complete the column below the occupant's number using the codes listed below. Complete a column for each child safety seat present.

Occupant Number						
1. Type of Child Safety Seat						
2. Child Safety Seat Orientation						
3. Child Safety Seat Harness Usage						
4. Child Safety Seat Shield Usage						
5. Child Safety Seat Tether Usage						
6. Child Safety Seat Make/Model	Specify Below for Each Child Safety Seat					

### 1. Type of Child Safety Seat

- (0) No child safety seat
- (1) Infant seat
- (2) Toddler seat
- (3) Convertible seat
- (4) Booster seat
- (7) Other type child safety seat (specify):

- (8) Unknown child safety seat type
- (9) Unknown if child safety seat used

### 2. Child Safety Seat Orientation

- (00) No child safety seat
- Designed for Rear Facing for This Age/Weight
- (01) Rear facing
- (02) Forward facing
- (08) Other orientation (specify):
- (09) Unknown orientation

Designed for Forward Facing for This Age/Weight

- (11) Rear facing
- (12) Forward facing
- (18) Other orientation (specify):

- (19) Unknown orientation

Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight

- (21) Rear facing
- (22) Forward facing
- (28) Other orientation (specify):

- (29) Unknown orientation

- (99) Unknown if child safety seat used

### 3. Child Safety Seat Harness Usage

### 4. Child Safety Seat Shield Usage

### 5. Child Safety Seat Tether Usage

Note: Options Below Are Used for Variables 3-5.

- (00) No child safety seat

Not Designed with Harness/Shield/Tether

- (01) After market harness/shield/tether added, not used
- (02) After market harness/shield/tether used
- (03) Child safety seat used, but no after market harness/shield/tether added
- (09) Unknown if harness/shield/tether added or used

Designed With Harness/Shield/Tether

- (11) Harness/shield/tether not used
- (12) Harness/shield/tether used
- (19) Unknown if harness/shield/tether used

Unknown If Designed With Harness/Shield/Tether

- (21) Harness/shield/tether not used
- (22) Harness/shield/tether used
- (29) Unknown if harness/shield/tether used

- (99) Unknown if child safety seat used

### 6. Child Safety Seat Make/Model (Specify make/model and occupant number)

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National Accident Sampling System-Crashworthiness Data System: Interior Vehicle Form Page 7**HEAD RESTRAINTS/SEAT EVALUATION**

**NOTES:** Encode the applicable data for **each seat position** in the vehicle. The attribute for these variables may be found at the bottom of the page. Head restraint type/damage and seat type/performance should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

		Left	Center	Right
<b>FIRST</b>	Head Restraint Type/Damage	3	0	3
	Seat Type	07	07	07
	Seat Performance	1	1	1
	Seat Orientation	1	1	1
<b>SECOND</b>	Head Restraint Type/Damage	0	0	0
	Seat Type	03	03	03
	Seat Performance	1	1	1
	Seat Orientation	1	1	1
<b>THIRD</b>	Head Restraint Type/Damage	/	/	/
	Seat Type			
	Seat Performance			
	Seat Orientation			
<b>OTHER</b>	Head Restraint Type/Damage	/	/	/
	Seat Type			
	Seat Performance			
	Seat Orientation			

**Head Restraint Type/Damage by Occupant at This Occupant Position**

- (0) No head restraints
- (1) Integral — no damage
- (2) Integral — damaged during accident
- (3) Adjustable — no damage
- (4) Adjustable — damaged during accident
- (5) Add-on — no damage
- (6) Add-on — damaged during accident
- (8) Other (specify): \_\_\_\_\_

(9) Unknown

**Seat Type (this Occupant Position)**

- (00) Occupant not seated or no seat
- (01) Bucket
- (02) Bucket with folding back
- (03) Bench
- (04) Bench with separate back cushions
- (05) Bench with folding back(s)
- (06) Split bench with separate back cushions
- (07) Split bench with folding back(s)
- (08) Pedestal (i.e., column supported)
- (09) Other seat type (specify): \_\_\_\_\_

(10) Box mounted seat (i.e., van type)

(99) Unknown

**Seat Performance (this Occupant Position)**

- (0) Occupant not seated or no seat
- (1) No seat performance failure(s)
- (2) Seat adjusters failed
- (3) Seat back folding locks or "seat back" failed specify: \_\_\_\_\_
- (4) Seat tracks/anchors failed
- (5) Deformed by impact of occupant
- (6) Deformed by passenger compartment intrusion (specify): \_\_\_\_\_

(7) Combination of above (specify): \_\_\_\_\_

(8) Other (specify): \_\_\_\_\_

(9) Unknown

**Seat Orientation (this Occupant Position)**

- (0) Occupant not seated or no seat
- (1) Forward facing seat
- (2) Rear facing seat
- (3) Side facing seat (inward)
- (4) Side facing seat (outward)
- (8) Other (specify): \_\_\_\_\_

(9) Unknown

**DESCRIBE ANY INDICATION OF ABNORMAL OCCUPANT POSTURE (I.E., UNUSUAL OCCUPANT CONTACT PATTERN)**

**EJECTION/ENTRAPMENT DATA**

Complete the following if the researcher has any indication that an occupant was either ejected from or entrapped in the vehicle. Code the appropriate data on the Occupant Assessment Form.

**EJECTION** No [ ☒ ] Yes [ ☐ ]

Describe indications of ejection and body parts involved in partial ejection(s):

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Occupant Number						
Ejection						
(Note on Vehicle Interior Sketch) Ejection Area						
Ejection Medium						
Medium Status						

**Ejection**

- (1) Complete ejection  
(1) Partial ejection  
(3) Ejection, Unknown degree  
(9) Unknown

**Ejection Area**

- (1) Windshield  
(2) Left front  
(3) Right front  
(4) Left rear  
(5) Right rear  
(6) Rear

**(7) Roof**

- (8) Other area (e.g., back of pickup, etc.) (specify):  
\_\_\_\_\_

**(9) Unknown****Ejection Medium**

- (1) Door/hatch/tailgate  
(2) Nonfixed roof structure  
(3) Fixed glazing  
(4) Nonfixed glazing (specify):  
\_\_\_\_\_

**(5) Integral structure**

- (8) Other medium (specify):  
\_\_\_\_\_

**(9) Unknown****Medium Status (Immediately Prior to Impact)**

- (1) Open  
(2) Closed  
(3) Integral structure  
(9) Unknown

**ENTRAPMENT** No [ ☒ ] Yes [ ☐ ]

Describe entrapment mechanism: \_\_\_\_\_

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Component(s): \_\_\_\_\_

(Note in vehicle interior diagram)

**APPENDIX D**  
**NASS Occupant Forms**



# OCCUPANT ASSESSMENT FORM

## OCCUPANT'S SEATING

1. Primary Sampling Unit Number

2. Case Number - Stratum

3. Vehicle Number

4. Occupant Number

## OCCUPANT'S CHARACTERISTICS

5. Occupant's Age

Code actual age at time of accident.

(00) Less than one year old (specify by month):

(97) 97 years and older

(99) Unknown

6. Occupant's Sex

(1) Male

(2) Female

(9) Unknown

7. Occupant's Height

Code actual height to the nearest  
centimeter.

(999) Unknown

62 inches X 2.54 = \_\_\_\_\_ centimeters

8. Occupant's Weight

Code actual weight to the nearest  
kilogram.

(999) Unknown

129 pounds X .4536 = \_\_\_\_\_ kilograms

9. Occupant's Role

(1) Driver

(2) Passenger

(9) Unknown

10. Occupant's Seat Position

*Front Seat*

(11) Left side

(12) Middle

(13) Right side

(14) Other (specify): \_\_\_\_\_

(15) On or in the lap of another occupant

*Second Seat*

(21) Left side

(22) Middle

(23) Right side

(24) Other (specify): \_\_\_\_\_

(25) On or in the lap of another occupant

*Third Seat*

(31) Left side

(32) Middle

(33) Right side

(34) Other (specify): \_\_\_\_\_

(35) On or in the lap of another occupant

*Fourth Seat*

(41) Left side

(42) Middle

(43) Right side

(44) Other (specify): \_\_\_\_\_

(45) On or in the lap of another occupant

(97) In or on unenclosed area

(98) Other seat (specify): \_\_\_\_\_

(99) Unknown

11. Occupant's Posture

(0) Normal posture

*Abnormal posture*

(1) Kneeling or standing on seat

(2) Lying on or across seat

(3) Kneeling, standing or sitting in front of seat

(4) Sitting sideways or turned to talk with another  
occupant or to look out a rear window

(5) Sitting on a console

(6) Lying back in a reclined seat position

(7) Bracing with feet or hands on a surface in front  
of seat

(8) Other abnormal posture (specify): \_\_\_\_\_

(9) Unknown

## EJECTION/ENTRAPMENT

12. Ejection 0

- (0) No ejection
- (1) Complete ejection
- (2) Partial ejection
- (3) Ejection, unknown degree
- (9) Unknown

13. Ejection Area 0

- (0) No ejection
- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear
- (7) Roof
- (8) Other area (e.g., back of pickup, etc.)  
(specify): \_\_\_\_\_
- (9) Unknown

14. Ejection Medium 0

- (0) No ejection
- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify): \_\_\_\_\_
- (5) Integral structure
- (8) Other medium (specify): \_\_\_\_\_
- (9) Unknown

15. Medium Status (Immediately Prior To Impact) 0

- (0) No ejection
- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

16. Entrapment 0

(NOTE: Entrapped means that part of the person was in the vehicle and mechanically restrained; jammed doors and immobilizing injuries by themselves are not sufficient to constitute entrapment.)

- (0) Not entrapped
- (1) Entrapped
- (9) Unknown

## RESTRAINT SYSTEM EVALUATION

<p>17. Manual (Active) Belt System Availability <u>4</u></p> <p>(0) None available</p> <p>(1) Belt removed/destroyed</p> <p>(2) Shoulder belt</p> <p>(3) Lap belt</p> <p>(4) Lap and shoulder belt</p> <p>(5) Belt available—type unknown</p> <p><i>Integral Belt Partially Destroyed</i></p> <p>(6) Shoulder belt (lap belt destroyed/removed)</p> <p>(7) Lap belt (shoulder belt destroyed/removed)</p> <p>(8) Other belt (specify): _____</p> <p>(9) Unknown _____</p> <p>18. Manual (Active) Belt System Use <u>00</u></p> <p>(00) None used, not available, or belt removed/destroyed</p> <p>(01) Inoperative (specify): _____</p> <p>(02) Shoulder belt _____</p> <p>(03) Lap belt _____</p> <p>(04) Lap and shoulder belt _____</p> <p>(05) Belt used—type unknown _____</p> <p>(08) Other belt used (specify): _____</p> <p>(12) Shoulder belt used with child safety seat</p> <p>(13) Lap belt used with child safety seat</p> <p>(14) Lap and shoulder belt used with child safety seat</p> <p>(15) Belt used with child safety seat—type unknown</p> <p>(18) Other belt used with child safety seat (specify): _____</p> <p>(99) Unknown if belt used _____</p> <p>19. Proper Use of Manual (Active) Belts <u>0</u></p> <p>(0) None used or not available</p> <p>(1) Belt used properly</p> <p>(2) Belt used properly with child safety seat</p> <p><i>Belt Used Improperly</i></p> <p>(3) Shoulder belt worn under arm</p> <p>(4) Shoulder belt worn behind back or seat</p> <p>(5) Belt worn around more than one person</p> <p>(6) Lap belt worn on abdomen</p> <p>(7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): _____</p> <p>(8) Other improper use of manual belt system (specify): _____</p> <p>(9) Unknown _____</p> <p>20. Manual (Active) Belt Failure Modes During Accident <u>0</u></p> <p>(0) No manual belt used</p> <p>(1) No manual belt failure(s)</p> <p>(2) Torn webbing (stretched webbing not included)</p> <p>(3) Broken buckle or latchplate</p> <p>(4) Upper anchorage separated</p> <p>(5) Other anchorage separated (specify): _____</p> <p>(6) Broken retractor _____</p> <p>(7) Combination of above (specify): _____</p> <p>(8) Other manual belt failure (specify): _____</p> <p>(9) Unknown _____</p>	<p>21. Air Bag System Availability/Function <u>1</u></p> <p>(0) Not equipped/not available</p> <p>(1) Air bag</p> <p><i>Non-functional</i></p> <p>(2) Air bag disconnected (specify): _____</p> <p>(3) Air bag not reinstalled _____</p> <p>(9) Unknown _____</p> <p>22. Air Bag System Deployment <u>1</u></p> <p>(0) Not equipped/not available</p> <p>(1) Air bag deployed during accident (as a result of impact)</p> <p>(2) Air bag deployed inadvertently just prior to accident</p> <p>(3) Air bag deployed, accident sequence undetermined</p> <p>(4) Nondeployed</p> <p>(5) Unknown if deployed</p> <p>(6) Air bag deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)</p> <p>(9) Unknown _____</p> <p>23. Are There Indications of Air Bag System Failure? <u>1</u></p> <p>(0) Not equipped/not available</p> <p>(1) No</p> <p>(2) Yes (specify): _____</p> <p>(9) Unknown _____</p> <p>Note: See Variables 44 through 48 (Page 5) for Information on Automatic Belts</p> <p>24. Police Reported Restraint Use <u>0</u></p> <p>(0) None used</p> <p>(1) Police did not indicate restraint use</p> <p>(2) Shoulder belt</p> <p>(3) Lap belt</p> <p>(4) Lap and shoulder belt</p> <p>(5) Belt used, type not specified</p> <p>(6) Child safety seat</p> <p>(7) Other or automatic restraint (specify): _____</p> <p>(8) Restrained, type unknown _____</p> <p>(9) Police indicated "unknown" _____</p>
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## HEAD RESTRAINT AND SEAT EVALUATION

25. Head Restraint Type/Damage by Occupant  
at This Occupant Position4

- (0) No head restraints
- (1) Integral—no damage
- (2) Integral—damaged during accident
- (3) Adjustable—no damage
- (4) Adjustable—damaged during accident
- (5) Add-on—no damage
- (6) Add-on—damaged during accident
- (8) Other (specify): \_\_\_\_\_
- (9) Unknown

## 26. Seat Type (this Occupant Position)

06

- (00) Occupant not seated or no seat
- (01) Bucket
- (02) Bucket with folding back
- (03) Bench
- (04) Bench with separate back cushions
- (05) Bench with folding back(s)
- (06) Split bench with separate back cushions
- (07) Split bench with folding back(s)
- (08) Pedestal (i.e., column supported)
- (09) Other seat type (specify): \_\_\_\_\_
- (10) Box mounted seat (i.e., van type)
- (99) Unknown

## 27. Seat Performance (this Occupant Position)

1

- (0) Occupant not seated or no seat
- (1) No seat performance failure(s)
- (2) Seat adjusters failed
- (3) Seat back folding locks or "seat back" failed
- (4) Seat track/anchors failed
- (5) Deformed by impact of occupant
- (6) Deformed by passenger compartment intrusion (specify): \_\_\_\_\_

(7) Combination of above (specify): \_\_\_\_\_

(8) Other (specify): \_\_\_\_\_

(9) Unknown

## CHILD SAFETY SEAT

28. Child Safety Seat Make/Model 000

(000) No child safety seat

Applicable codes are found in your NASS CDS  
Data Collection, Coding and Editing

(950) Built-in child safety seat

(997) Other make/model (specify):

(998) Unknown make/model

(999) Unknown if child safety seat used

29. Type of Child Safety Seat 0

(0) No child safety seat

(1) Infant seat

(2) Toddler seat

(3) Convertible seat

(4) Booster seat

(7) Other type child safety seat (specify):

(8) Unknown child safety seat type

(9) Unknown if child safety seat used

30. Child Safety Seat Orientation 00

(00) No child safety seat

*Designed for Rear Facing for This Age/Weight*

(01) Rear facing

(02) Forward facing

(08) Other orientation (specify):

(09) Unknown orientation

*Designed For Forward Facing for This Age/Weight*

(11) Rear facing

(12) Forward facing

(18) Other orientation (specify):

(19) Unknown orientation

*Unknown Design or Orientation For This  
Age/Weight, or Unknown Age/Weight*

(21) Rear facing

(22) Forward facing

(28) Other orientation (specify):

(29) Unknown orientation

(99) Unknown if child safety seat used

31. Child Safety Seat Harness Usage 0032. Child Safety Seat Shield Usage 0033. Child Safety Seat Tether Usage 00Note: Options below applicable to  
Variables OA31-OA33.

(00) No child safety seat

*Not Designed With Harness/Shield/Tether*(01) After market harness/shield/tether  
added, not used

(02) After market harness/shield/tether used

(03) Child safety seat used, but no after market  
harness/shield/tether added(09) Unknown if harness/shield/tether  
added or used*Designed With Harness/Shield/Tether*

(11) Harness/shield/tether not used

(12) Harness/shield/tether used

(19) Unknown if harness/shield/tether used

*Unknown If Designed With Harness/Shield/Tether*

(21) Harness/shield/tether not used

(22) Harness/shield/tether used

(29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used

## INJURY CONSEQUENCES

34. Injury Severity (Police Rating) 4

- (0) O - No injury
- (1) C - Possible injury
- (2) B - Nonincapacitating injury
- (3) A - Incapacitating injury
- (4) K - Killed
- (5) U - Injury, severity unknown
- (6) Died prior to accident
- (9) Unknown

35. Treatment - Mortality 1

- (0) No treatment
- (1) Fatal
- (2) Fatal - ruled disease (specify):

*Nonfatal*

- (3) Hospitalization
- (4) Transported and released
- (5) Treatment at scene - nontransported
- (6) Treatment later
- (8) Treatment - other (specify):
- (9) Unknown

36. Type Of Medical Facility (for Initial Treatment) 1

- (0) Not treated at a medical facility
- (1) Trauma center
- (2) Hospital
- (3) Medical clinic
- (4) Physician's office
- (5) Treatment later at medical facility
- (8) Other (specify):
- (9) Unknown

37. Hospital Stay 00

- (00) Not Hospitalized

Code the number of days (up through 60) that the occupant stayed in hospital.

- (61) 61 days or more
- (99) Unknown

38. Working Days Lost 62

- Code the number of days (up through 60) that the occupant lost from work due to the accident
- (00) No working days lost
  - (61) 61 days or more
  - (62) Fatally injured
  - (97) Not working prior to accident
  - (99) Unknown

STOP - GO TO VARIABLE 44 ON PAGE 7

VARIABLES 39 THROUGH 43 ARE COMPLETED BY THE ZONE CENTER

39. Time to Death 01

- Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 + n up through 30 days = 60)
- (00) Not fatal
  - (96) Fatal - ruled disease
  - (99) Unknown

40. 1st Medically Reported Cause of Death 0141. 2nd Medically Reported Cause of Death 0242. 3rd Medically Reported Cause of Death 05

- Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death
- (00) Not fatal or no additional causes
  - (97) Other result (includes fatal ruled disease) (specify):

- (99) Unknown

43. Number of Recorded Injuries for This Occupant 39

- Code the actual number of injuries recorded for this occupant.
- (00) No recorded injuries
  - (97) Injured, details unknown
  - (99) Unknown if injured

**AUTOMATIC BELT SYSTEM**44. Automatic (Passive) Belt System Availability/Function 0

- (0) Not equipped/not available
- (1) 2 point automatic belts
- (2) 3 point automatic belts
- (3) Automatic belts - type unknown

*Non-functional*

- (4) Automatic belts destroyed or rendered inoperative
- (9) Unknown

45. Automatic (Passive) Belt System Use 0

- (0) Not equipped/not available/destroyed or rendered inoperative
- (1) Automatic belt in use
- (2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify):

- (3) Automatic belt use unknown
- (9) Unknown

46. Automatic (Passive) Belt System Type 0

- (0) Not equipped/not available
- (1) Non-motorized system
- (2) Motorized system
- (9) Unknown

47. Proper Use of Automatic (Passive) Belt System 0

- (0) Not equipped/not available/not used
- (1) Automatic belt used properly
- (2) Automatic belt used properly with child safety seat

*Automatic Belt Used Improperly*

- (3) Automatic shoulder belt worn under arm
- (4) Automatic shoulder belt worn behind back
- (5) Automatic belt worn around more than one person
- (6) Lap portion of automatic belt worn on abdomen
- (7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify):

- (8) Other improper use of automatic belt system (specify):
- (9) Unknown

48. Automatic (Passive) Belt Failure Modes During Accident 0

- (0) Not equipped/not available/not in use
- (1) No automatic belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify):

- (6) Broken retractor
- (7) Combination of above (specify):
- (8) Other automatic belt failure (specify):

- (9) Unknown

49. Seat Orientation (this Occupant Position) 1

- (0) Occupant not seated or no seat
- (1) Forward facing seat
- (2) Rear facing seat
- (3) Side facing seat (inward)
- (4) Side facing seat (outward)
- (8) Other (specify):

- (9) Unknown

**STOP - VARIABLES 50 THROUGH 52 ARE COMPLETED BY THE ZONE CENTER****TRAUMA DATA**50. Glasgow Coma Scale (GCS) Score 0 2

- (at Medical Facility)
- (00) Not injured
- (01) Injured - not treated at medical facility
- (02) No GCS Score at medical facility
- (03-15) Code the actual value of the initial GCS Score recorded at medical facility.
- (97) Injured, details unknown
- (99) Unknown if injured

51. Was the Occupant Given Blood? 1

- (1) No - blood not given
- (2) Yes - blood given (specify units):
- (9) Unknown if blood given

52. Arterial Blood Gases (ABG) - HCO<sub>3</sub> 0 1

- (00) Not injured
- (01) Injured, ABGs not measured or reported
- (02-50) Code the actual value of the HCO<sub>3</sub>
- (96) ABGs reported, HCO<sub>3</sub> unknown
- (97) Injured, details unknown
- (99) Unknown if injured

ARE ALL APPLICABLE MEDICAL RECORDS INCLUDED WITH INITIAL SUBMISSION?

NO [ ] YES [ ]

UPDATE CANDIDATE?

NO [ ] YES [ ]



# OCCUPANT INJURY FORM

NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number _____	3. Vehicle Number <u>01</u>
2. Case Number - Stratum <u>93-9</u>	4. Occupant Number <u>01</u>

## INJURY DATA

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

Source of Injury Data	O.I.C.-A.I.S.						Injury Source	Injury Confidence Level	Direct/Indirect Injury	Occupant Area Intrusion Number	
	Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect					
<i>acc &amp; restraints</i> 1st	5. <u>1</u>	6. <u>1</u>	7. <u>4</u>	8. <u>02</u>	9. <u>12</u>	10. <u>6</u>	11. <u>8</u>	12. <u>45</u>	13. <u>1</u>	14. <u>1</u>	15. <u>00</u>
<i>subdural extraction</i> 2nd	16. <u>1</u>	17. <u>1</u>	18. <u>4</u>	19. <u>04</u>	20. <u>45</u>	21. <u>5</u>	22. <u>6</u>	23. <u>45</u>	24. <u>1</u>	25. <u>1</u>	26. <u>00</u>
<i>subarachnoid hemorrhage</i> 3rd	27. <u>1</u>	28. <u>1</u>	29. <u>4</u>	30. <u>04</u>	31. <u>66</u>	32. <u>3</u>	33. <u>6</u>	34. <u>45</u>	35. <u>1</u>	36. <u>1</u>	37. <u>00</u>
<i>lateral rib-fr</i> 4th	38. <u>1</u>	39. <u>4</u>	40. <u>5</u>	41. <u>02</u>	42. <u>42</u>	43. <u>5</u>	44. <u>3</u>	45. <u>16</u>	46. <u>1</u>	47. <u>1</u>	48. <u>00</u>
<i>luc @ Aortic</i> 5th	49. <u>1</u>	50. <u>4</u>	51. <u>4</u>	52. <u>10</u>	53. <u>12</u>	54. <u>5</u>	55. <u>4</u>	56. <u>16</u>	57. <u>1</u>	58. <u>1</u>	59. <u>00</u>
<i>luc of Aortic</i> 6th	60. <u>1</u>	61. <u>4</u>	62. <u>2</u>	63. <u>02</u>	64. <u>08</u>	65. <u>4</u>	66. <u>4</u>	67. <u>16</u>	68. <u>1</u>	69. <u>1</u>	70. <u>00</u>
<i>luc of lower</i> 7th	71. <u>1</u>	72. <u>5</u>	73. <u>4</u>	74. <u>18</u>	75. <u>26</u>	76. <u>4</u>	77. <u>1</u>	78. <u>16</u>	79. <u>1</u>	80. <u>1</u>	81. <u>00</u>
<i>fr of cervical vertebrae</i> 8th	82. <u>1</u>	83. <u>6</u>	84. <u>5</u>	85. <u>02</u>	86. <u>22</u>	87. <u>3</u>	88. <u>6</u>	89. <u>45</u>	90. <u>1</u>	91. <u>1</u>	92. <u>00</u>
<i>Dislocation of lumbosacral occipital</i> 9th	93. <u>1</u>	94. <u>6</u>	95. <u>5</u>	96. <u>02</u>	97. <u>08</u>	98. <u>2</u>	99. <u>6</u>	100. <u>45</u>	101. <u>1</u>	102. <u>1</u>	103. <u>00</u>
<i>acc of cervical</i> 10th	104. <u>1</u>	105. <u>5</u>	106. <u>4</u>	107. <u>20</u>	108. <u>22</u>	109. <u>2</u>	110. <u>8</u>	111. <u>16</u>	112. <u>1</u>	113. <u>1</u>	114. <u>00</u>



## OCCUPANT INJURY DATA

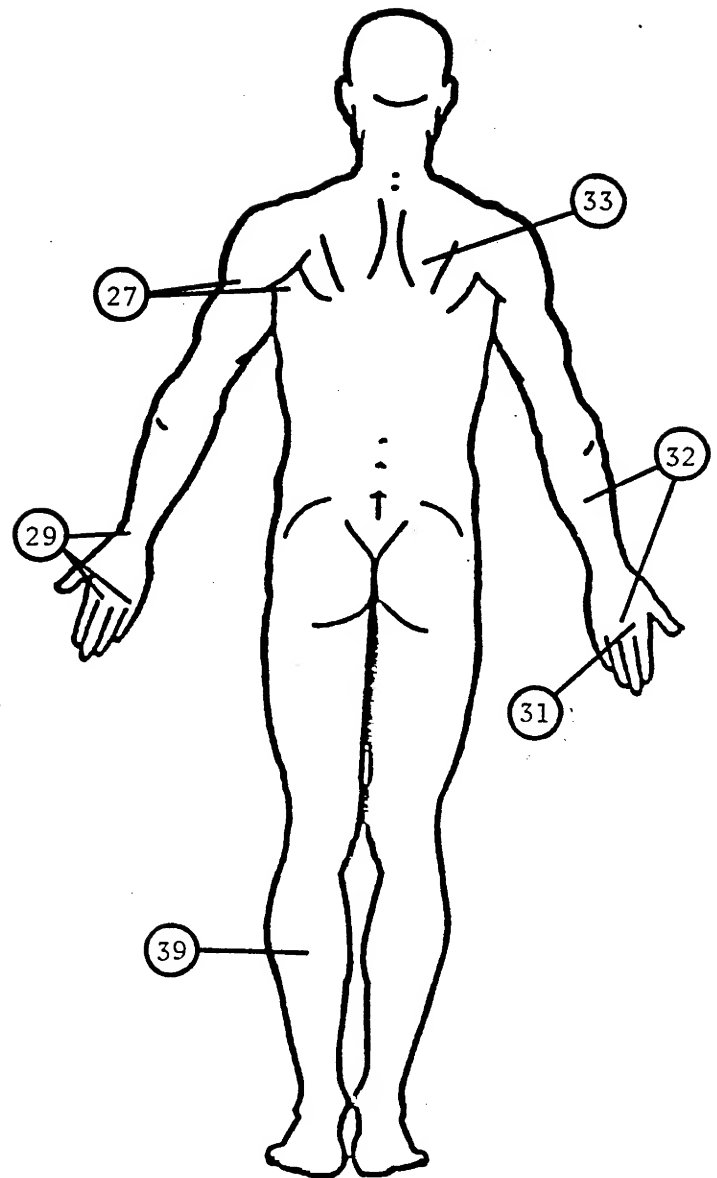
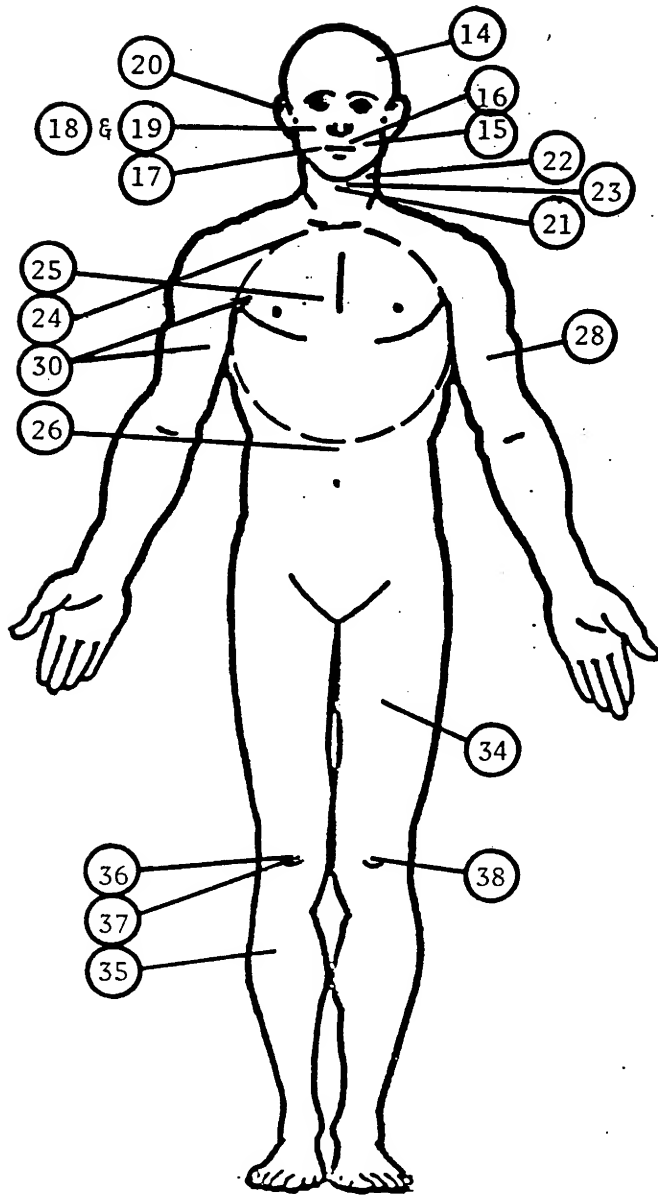
Source of Injury Data	O.I.C.-A.I.S						Injury Source	Injury Source Confidence Level	Direct/Indirect Injury	Occupant Area Intrusion Number	
	Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect					
Loc of pericardium 11th	<u>1</u>	<u>4</u>	<u>4</u>	<u>16</u>	<u>02</u>	<u>2</u>	<u>4</u>	<u>16</u>	<u>1</u>	<u>1</u>	<u>00</u>
Membrane 12th mediastinum	<u>1</u>	<u>4</u>	<u>4</u>	<u>18</u>	<u>04</u>	<u>2</u>	<u>4</u>	<u>16</u>	<u>1</u>	<u>1</u>	<u>00</u>
Dislocation 13th ② acromioclavicular	<u>1</u>	<u>7</u>	<u>5</u>	<u>02</u>	<u>30</u>	<u>2</u>	<u>1</u>	<u>45</u>	<u>1</u>	<u>1</u>	<u>00</u>
Cont. head 14th	<u>1</u>	<u>1</u>	<u>9</u>	<u>04</u>	<u>02</u>	<u>1</u>	<u>2</u>	<u>49</u> <small>Courtesy 2,544</small>	<u>1</u>	<u>1</u>	<u>00</u>
Loc lip 15th	<u>1</u>	<u>2</u>	<u>9</u>	<u>06</u>	<u>02</u>	<u>1</u>	<u>8</u>	<u>45</u>	<u>1</u>	<u>1</u>	<u>00</u>
lip contusion 16th	<u>1</u>	<u>2</u>	<u>9</u>	<u>04</u>	<u>02</u>	<u>1</u>	<u>8</u>	<u>45</u>	<u>1</u>	<u>1</u>	<u>00</u>
Abuse of mouth 17th	<u>1</u>	<u>2</u>	<u>9</u>	<u>02</u>	<u>02</u>	<u>1</u>	<u>8</u>	<u>45</u>	<u>1</u>	<u>1</u>	<u>00</u>
cont of ② back 18th	<u>1</u>	<u>2</u>	<u>9</u>	<u>04</u>	<u>02</u>	<u>1</u>	<u>1</u>	<u>45</u>	<u>1</u>	<u>1</u>	<u>00</u>
Abuse of ② face 19th	<u>1</u>	<u>2</u>	<u>9</u>	<u>02</u>	<u>02</u>	<u>1</u>	<u>1</u>	<u>45</u>	<u>1</u>	<u>1</u>	<u>00</u>
Abuse of ② ear 20th	<u>1</u>	<u>2</u>	<u>9</u>	<u>02</u>	<u>02</u>	<u>1</u>	<u>6</u>	<u>45</u>	<u>2</u>	<u>1</u>	<u>00</u>
Abuse of neck 21st	<u>1</u>	<u>3</u>	<u>9</u>	<u>02</u>	<u>02</u>	<u>1</u>	<u>0</u>	<u>16</u>	<u>1</u>	<u>1</u>	<u>00</u>
cont. of ② back 22nd	<u>1</u>	<u>3</u>	<u>9</u>	<u>04</u>	<u>02</u>	<u>1</u>	<u>2</u>	<u>45</u>	<u>1</u>	<u>1</u>	<u>00</u>
ac of ② back 23rd	<u>1</u>	<u>3</u>	<u>9</u>	<u>06</u>	<u>02</u>	<u>1</u>	<u>2</u>	<u>16</u>	<u>1</u>	<u>1</u>	<u>00</u>
cont of chest 24th	<u>1</u>	<u>4</u>	<u>9</u>	<u>04</u>	<u>02</u>	<u>1</u>	<u>0</u>	<u>16</u>	<u>1</u>	<u>1</u>	<u>00</u>
Abuse of chest 25th	<u>1</u>	<u>4</u>	<u>9</u>	<u>02</u>	<u>02</u>	<u>1</u>	<u>0</u>	<u>16</u>	<u>1</u>	<u>1</u>	<u>00</u>

## OCCUPANT INJURY DATA SUPPLEMENT

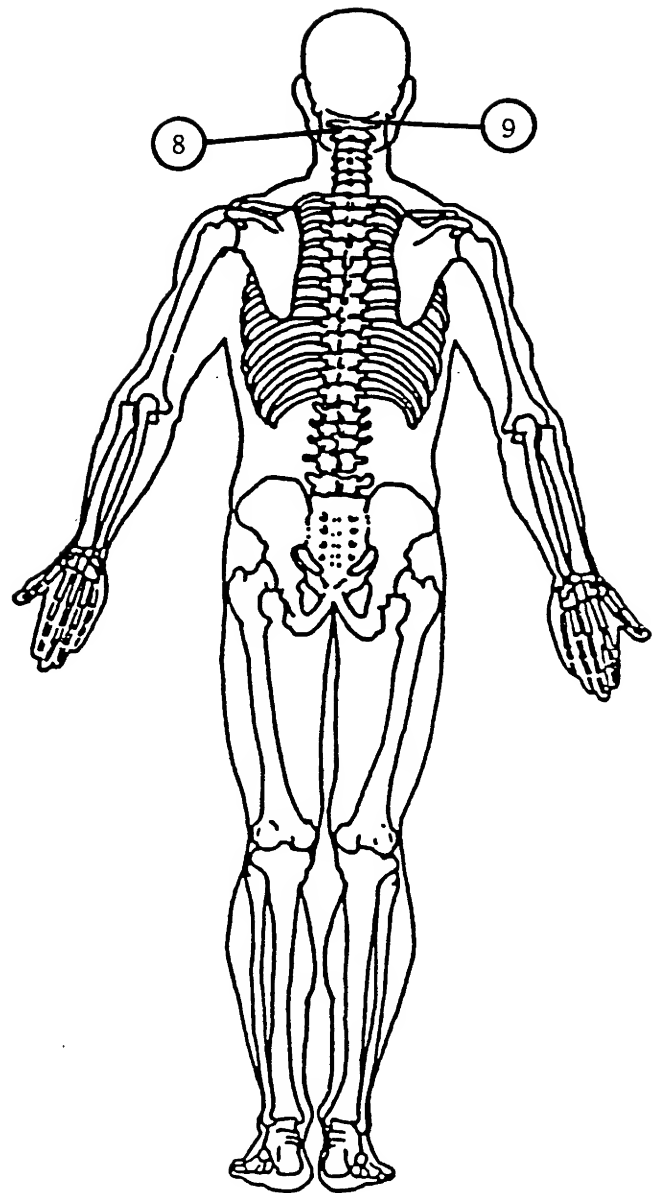
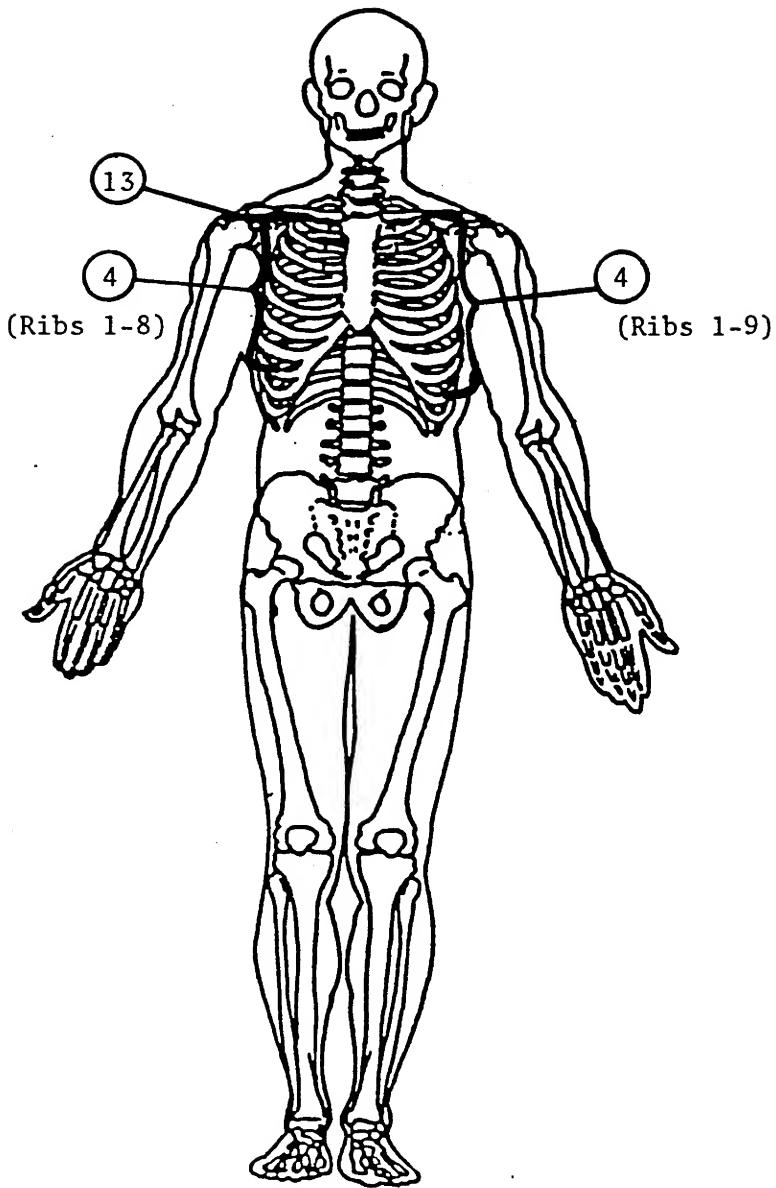
	Source of Injury Data	O.I.C.-A.I.S						Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number	
		Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect					
int of abdomen	26	1	5	9	04	02	1	4	16	1	1	00
nt. of arm	27	1	7	9	04	02	1	2	44	1	1	00
cont (L) arm	28	1	7	9	04	02	1	2	45	1	1	00
cont (L) wrist	29	1	7	9	04	02	1	2	20	1	1	00
cont (R) arm	30	1	7	9	04	02	1	1	45	1	1	00
brasion (R) hand	31	1	7	9	02	02	1	1	54	2	1	00
ext (R) forearm	32	1	7	9	04	02	1	1	09	1	1	00
ext (R) Scapula	33	1	7	9	04	02	1	1	40	1	1	00
ext (L) thigh	34	1	8	9	04	02	1	2	04	1	1	00
ext (R) leg	35	1	8	9	04	02	1	1	09	1	1	00
cont (R) knee	36	1	8	9	04	02	1	1	13	1	1	00
A. Brasion (R) knee	37	1	8	9	02	02	1	1	13	1	1	00
ext tension (L) knee	38	1	8	9	04	02	1	2	13	1	1	00
ext tension (L) calf	39	1	8	9	04	02	1	2	40	1	1	00



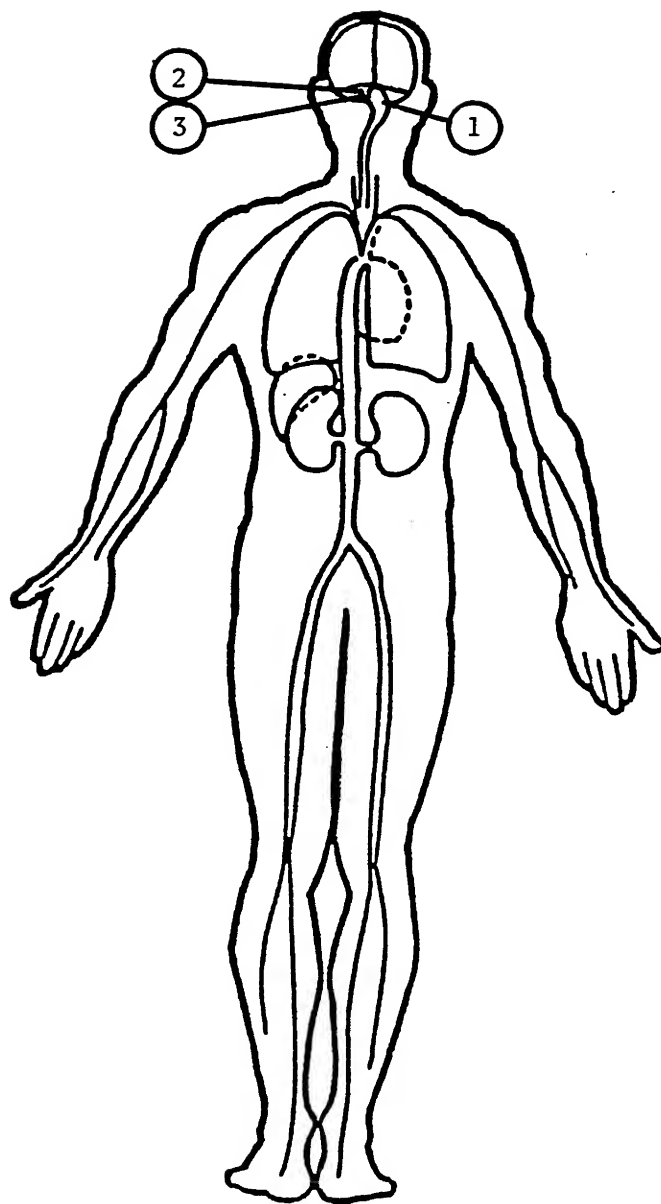
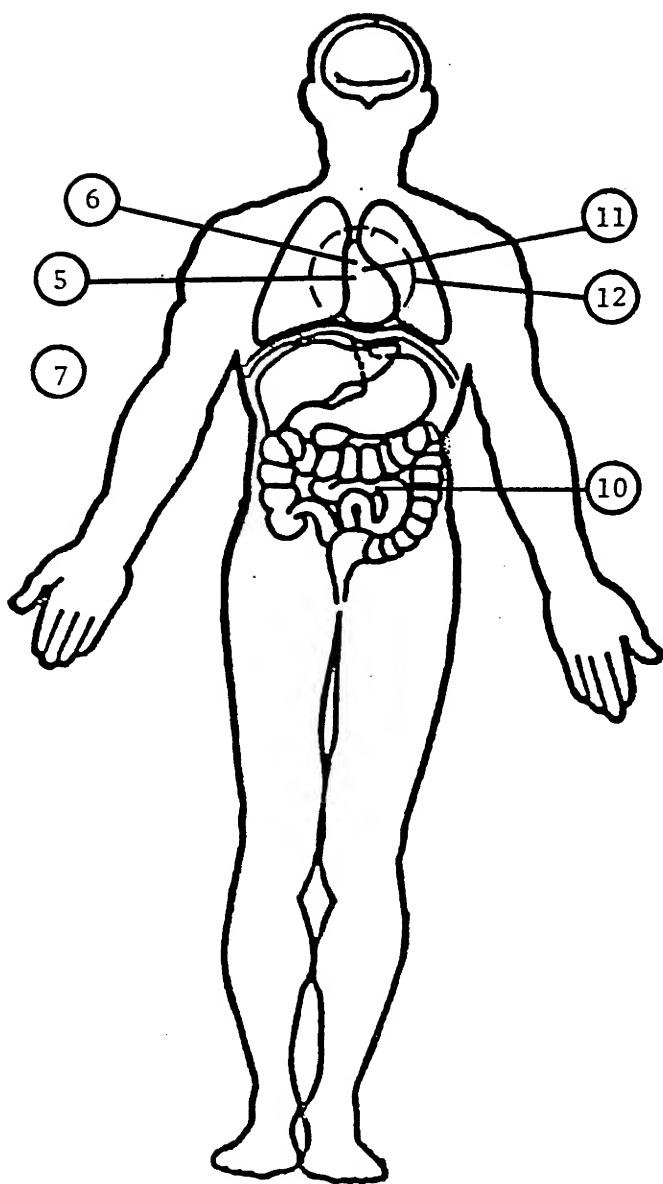
Driver of the 1990 Ford Taurus GL



Driver of the 1990 Ford Taurus GL



Driver of the 1990 Ford Taurus GL



## SOURCE OF INJURY DATA

### OFFICIAL

- (1) Autopsy records with or without hospital/medical records
- (2) Hospital/medical records other than emergency room (e.g., discharge summary)
- (3) Emergency room records only (including associated X-rays or other lab reports)
- (4) Private physician, walk-in or emergency clinic

### UNOFFICIAL

- (5) Lay coroner report
- (6) E.M.S. personnel
- (7) Interviewee
- (8) Other source (specify): \_\_\_\_\_
- (9) Police

## INJURY SOURCE

### FRONT

- (01) Windshield
- (02) Mirror
- (03) Sunvisor
- (04) Steering wheel rim
- (05) Steering wheel hub/spoke
- (06) Steering wheel (combination of codes 04 and 05)
- (07) Steering column, transmission selector lever, other attachment
- (08) Add on equipment (e.g., CB, tape deck, air conditioner)
- (09) Left instrument panel and below
- (10) Center instrument panel and below
- (11) Right instrument panel and below
- (12) Glove compartment door
- (13) Knee bolster
- (14) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (15) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
- (16) Driver side air bag compartment cover
- (17) Passenger side air bag compartment cover
- (18) Windshield reinforced by exterior object (specify): \_\_\_\_\_
- (19) Other front object (specify): \_\_\_\_\_

### LEFT SIDE

- (20) Left side interior surface, excluding hardware or armrests
- (21) Left side hardware or armrest
- (22) Left A (A1/A2)-pillar
- (23) Left B-pillar
- (24) Other left pillar (specify): \_\_\_\_\_

- (25) Left side window glass or frame
- (26) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (27) Other left side object (specify): \_\_\_\_\_

- (28) Left side window sill

### RIGHT SIDE

- (30) Right side interior surface, excluding hardware or armrests
- (31) Right side hardware or armrest
- (32) Right A (A1/A2)-pillar
- (33) Right B-pillar
- (34) Other right pillar (specify): \_\_\_\_\_
- (35) Right side window glass or frame
- (36) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (37) Other right side object (specify): \_\_\_\_\_

- (38) Right side window sill

### INTERIOR

- (40) Seat, back support
- (41) Belt restraint webbing/buckle
- (42) Belt restraint B-pillar or door frame attachment point
- (43) Other restraint system component (specify): \_\_\_\_\_
- (44) Head restraint system
- (45) Air bag (use codes "16" and "17" for injuries sustained from air bag compartment covers)
- (46) Other occupants (specify): \_\_\_\_\_
- (47) Interior loose objects
- (48) Child safety seat (specify): \_\_\_\_\_
- (49) Other interior object (specify): \_\_\_\_\_

### ROOF

- (50) Front header
- (51) Rear header
- (52) Roof left side rail
- (53) Roof right side rail
- (54) Roof or convertible top

### FLOOR

- (56) Floor (including toe pan)
- (57) Floor or console mounted transmission lever, including console
- (58) Parking brake handle
- (59) Foot controls including parking brake

### REAR

- (80) Backlight (rear window)

- (61) Backlight storage rack, door, etc.
- (62) Other rear object (specify): \_\_\_\_\_

### EXTERIOR of OCCUPANT'S VEHICLE

- (65) Hood
- (66) Outside hardware (e.g., outside mirror, antenna)
- (67) Other exterior surface or tires (specify): \_\_\_\_\_
- (68) Unknown exterior objects

### EXTERIOR of OTHER MOTOR VEHICLE

- (70) Front bumper
- (71) Hood edge
- (72) Other front of vehicle (specify): \_\_\_\_\_

- (73) Hood
- (74) Hood ornament
- (75) Windshield, roof rail, A-pillar
- (76) Side surface
- (77) Side mirrors
- (78) Other side protrusions (specify): \_\_\_\_\_

- (79) Rear surface
- (80) Undercarriage
- (81) Tires and wheels
- (82) Other exterior of other motor vehicle (specify): \_\_\_\_\_

- (83) Unknown exterior of other motor vehicle

### OTHER VEHICLE OR OBJECT IN THE ENVIRONMENT

- (84) Ground
- (85) Other vehicle or object (specify): \_\_\_\_\_
- (86) Unknown vehicle or object

### NONCONTACT INJURY

- (90) Fire in vehicle
- (91) Flying glass
- (92) Other noncontact injury source (specify): \_\_\_\_\_
- (93) Air bag exhaust gases
- (97) Injured, unknown source

## INJURY SOURCE CONFIDENCE LEVEL

- (1) Certain
- (2) Probable
- (3) Possible
- (9) Unknown

## DIRECT/INDIRECT INJURY

- (1) Direct contact injury
- (2) Indirect contact injury
- (3) Noncontact injury
- (7) Injured, unknown source

## OCCUPANT INJURY CLASSIFICATION

### Body Region

- (1) Head
- (2) Face
- (3) Neck
- (4) Thorax
- (5) Abdomen
- (6) Spine
- (7) Upper Extremity
- (8) Lower Extremity
- (9) Unspecified

### Type of Anatomic Structure

- (1) Whole Area
- (2) Vessels
- (3) Nerves
- (4) Organs (includes muscles/ligaments)
- (5) Skeletal (includes joints)
- (6) Head - LOC
- (9) Skin

### Specific Anatomic Structure

#### Whole Area

- (02) Skin - Abrasion
- (04) Skin - Contusion
- (06) Skin - Laceration
- (08) Skin - Avulsion
- (10) Amputation
- (20) Burn
- (30) Crush
- (40) Degloving
- (50) Injury - NFS
- (80) Trauma, other than mechanical

#### Head - LOC

- (02) Length of LOC
- (04, 06, 08) Level of Consciousness
- (10) Concussion

### Spine

- (02) Cervical
- (04) Thoracic
- (06) Lumbar

Vessels, Nerves, Organs, Bones,  
Joints are assigned consecutive two digit numbers beginning with 02

### Level of Injury

Specific injuries are assigned consecutive two-digit numbers beginning with 02.

To the extent possible, within the organizational framework of the AIS, 00 is assigned to an injury NFS as to severity or where only one injury is given in the dictionary for that anatomic structure. 99 is assigned to any injury NFS as to lesion or severity.

### Abbreviated Injury Scale

- (1) Minor injury
- (2) Moderate injury
- (3) Serious injury
- (4) Severe injury
- (5) Critical injury
- (6) Maximum (untreatable)
- (7) Injured, unknown severity

### Aspect

- (1) Right
- (2) Left
- (3) Bilateral
- (4) Central
- (5) Anterior
- (6) Posterior
- (7) Superior
- (8) Inferior
- (9) Unknown
- (0) Whole region



## OCCUPANT ASSESSMENT FORM

1. Primary Sampling Unit Number

2. Case Number - Stratum

3. Vehicle Number

4. Occupant Number

### OCCUPANT'S CHARACTERISTICS

5. Occupant's Age

Code actual age at time of accident.

(00) Less than one year old (specify by month):

(97) 97 years and older

(99) Unknown

6. Occupant's Sex

(1) Male

(2) Female

(9) Unknown

7. Occupant's Height

Code actual height to the nearest  
centimeter.

(999) Unknown

74 inches X 2.54 = 188 centimeters

8. Occupant's Weight

Code actual weight to the nearest  
kilogram.

(999) Unknown

220 pounds X .4536 = 100 kilograms

9. Occupant's Role

(1) Driver

(2) Passenger

(9) Unknown

### OCCUPANT'S SEATING

10. Occupant's Seat Position

*Front Seat*

(11) Left side

(12) Middle

(13) Right side

(14) Other (specify):

(15) On or in the lap of another occupant

*Second Seat*

(21) Left side

(22) Middle

(23) Right side

(24) Other (specify):

(25) On or in the lap of another occupant

*Third Seat*

(31) Left side

(32) Middle

(33) Right side

(34) Other (specify):

(35) On or in the lap of another occupant

*Fourth Seat*

(41) Left side

(42) Middle

(43) Right side

(44) Other (specify):

(45) On or in the lap of another occupant

(97) In or on unenclosed area

(98) Other seat (specify):

(99) Unknown

11. Occupant's Posture

(0) Normal posture

*Abnormal posture*

(1) Kneeling or standing on seat

(2) Lying on or across seat

(3) Kneeling, standing or sitting in front of seat

(4) Sitting sideways or turned to talk with another  
occupant or to look out a rear window

(5) Sitting on a console

(6) Lying back in a reclined seat position

(7) Bracing with feet or hands on a surface in front  
of seat

(8) Other abnormal posture (specify):

(9) Unknown

## EJECTION/ENTRAPMENT

12. Ejection 0

- (0) No ejection
- (1) Complete ejection
- (2) Partial ejection
- (3) Ejection, unknown degree
- (9) Unknown

13. Ejection Area 0

- (0) No ejection
- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear
- (7) Roof
- (8) Other area (e.g., back of pickup, etc.)  
(specify): \_\_\_\_\_
- (9) Unknown

14. Ejection Medium 0

- (0) No ejection
- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify): \_\_\_\_\_
- (5) Integral structure
- (8) Other medium (specify): \_\_\_\_\_
- (9) Unknown

15. Medium Status (Immediately Prior To Impact) 0

- (0) No ejection
- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

16. Entrapment 0

(NOTE: Entrapped means that part of the person was in the vehicle and mechanically restrained; jammed doors and immobilizing injuries by themselves are not sufficient to constitute entrapment.)

- (0) Not entrapped
- (1) Entrapped
- (9) Unknown

## RESTRAINT SYSTEM EVALUATION

17. Manual (Active) Belt System Availability 4

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available—type unknown

*Integral Belt Partially Destroyed*

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)

(8) Other belt (specify): \_\_\_\_\_

(9) Unknown \_\_\_\_\_

18. Manual (Active) Belt System Use 00

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperative (specify): \_\_\_\_\_

(02) Shoulder belt \_\_\_\_\_

(03) Lap belt \_\_\_\_\_

(04) Lap and shoulder belt \_\_\_\_\_

(05) Belt used—type unknown \_\_\_\_\_

(08) Other belt used (specify): \_\_\_\_\_

(12) Shoulder belt used with child safety seat \_\_\_\_\_

(13) Lap belt used with child safety seat \_\_\_\_\_

(14) Lap and shoulder belt used with child safety seat \_\_\_\_\_

(15) Belt used with child safety seat—type unknown \_\_\_\_\_

(18) Other belt used with child safety seat (specify): \_\_\_\_\_

(99) Unknown if belt used \_\_\_\_\_

19. Proper Use of Manual (Active) Belts 0

- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child safety seat

*Belt Used Improperly*

- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): \_\_\_\_\_

(8) Other improper use of manual belt system (specify): \_\_\_\_\_

(9) Unknown \_\_\_\_\_

20. Manual (Active) Belt Failure Modes During Accident 0

- (0) No manual belt used
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): \_\_\_\_\_

(6) Broken retractor \_\_\_\_\_

(7) Combination of above (specify): \_\_\_\_\_

(8) Other manual belt failure (specify): \_\_\_\_\_

(9) Unknown \_\_\_\_\_

21. Air Bag System Availability/Function 0

- (0) Not equipped/not available
- (1) Air bag

*Non-functional*

(2) Air bag disconnected (specify): \_\_\_\_\_

(3) Air bag not reinstalled \_\_\_\_\_

(9) Unknown \_\_\_\_\_

22. Air Bag System Deployment 0

- (0) Not equipped/not available
- (1) Air bag deployed during accident (as a result of impact)
- (2) Air bag deployed inadvertently just prior to accident
- (3) Air bag deployed, accident sequence undetermined
- (4) Nondeployed
- (5) Unknown if deployed
- (6) Air bag deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
- (9) Unknown

23. Are There Indications of Air Bag System Failure? 0

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify): \_\_\_\_\_

(9) Unknown \_\_\_\_\_

Note: See Variables 44 through 48 (Page 5) for Information on Automatic Belts

24. Police Reported Restraint Use 0

- (0) None used
- (1) Police did not indicate restraint use
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt used, type not specified
- (6) Child safety seat
- (7) Other or automatic restraint (specify): \_\_\_\_\_

(8) Restrained, type unknown \_\_\_\_\_

(9) Police indicated "unknown" \_\_\_\_\_



## HEAD RESTRAINT AND SEAT EVALUATION

25. Head Restraint Type/Damage by Occupant  
at This Occupant Position3

- (0) No head restraints
- (1) Integral—no damage
- (2) Integral—damaged during accident
- (3) Adjustable—no damage
- (4) Adjustable—damaged during accident
- (5) Add-on—no damage
- (6) Add-on—damaged during accident
- (8) Other (specify): \_\_\_\_\_

(9) Unknown

## 26. Seat Type (this Occupant Position)

07

- (00) Occupant not seated or no seat
- (01) Bucket
- (02) Bucket with folding back
- (03) Bench
- (04) Bench with separate back cushions
- (05) Bench with folding back(s)
- (06) Split bench with separate back cushions
- (07) Split bench with folding back(s)
- (08) Pedestal (i.e., column supported)
- (09) Other seat type (specify): \_\_\_\_\_

- (10) Box mounted seat (i.e., van type)
- (99) Unknown

## 27. Seat Performance (this Occupant Position)

1

- (0) Occupant not seated or no seat
- (1) No seat performance failure(s)
- (2) Seat adjusters failed
- (3) Seat back folding locks or "seat back" failed
- (4) Seat track/anchors failed
- (5) Deformed by impact of occupant
- (6) Deformed by passenger compartment intrusion (specify): \_\_\_\_\_

(7) Combination of above (specify): \_\_\_\_\_

(8) Other (specify): \_\_\_\_\_

(9) Unknown

## CHILD SAFETY SEAT

28. Child Safety Seat Make/Model 0 0 0

(000) No child safety seat

Applicable codes are found in your NASS CDS  
Data Collection, Coding and Editing

(950) Built-in child safety seat

(997) Other make/model (specify):

(998) Unknown make/model

(999) Unknown if child safety seat used

29. Type of Child Safety Seat 0

(0) No child safety seat

(1) Infant seat

(2) Toddler seat

(3) Convertible seat

(4) Booster seat

(7) Other type child safety seat (specify):

(8) Unknown child safety seat type

(9) Unknown if child safety seat used

30. Child Safety Seat Orientation 00

(00) No child safety seat

*Designed for Rear Facing for This Age/Weight*

(01) Rear facing

(02) Forward facing

(08) Other orientation (specify):

(09) Unknown orientation

*Designed For Forward Facing for This Age/Weight*

(11) Rear facing

(12) Forward facing

(18) Other orientation (specify):

(19) Unknown orientation

*Unknown Design or Orientation For This  
Age/Weight, or Unknown Age/Weight*

(21) Rear facing

(22) Forward facing

(28) Other orientation (specify):

(29) Unknown orientation

(99) Unknown if child safety seat used

31. Child Safety Seat Harness Usage 0032. Child Safety Seat Shield Usage 0033. Child Safety Seat Tether Usage 00Note: Options below applicable to  
Variables OA31-OA33.

(00) No child safety seat

*Not Designed With Harness/Shield/Tether*(01) After market harness/shield/tether  
added, not used

(02) After market harness/shield/tether used

(03) Child safety seat used, but no after market  
harness/shield/tether added(09) Unknown if harness/shield/tether  
added or used*Designed With Harness/Shield/Tether*

(11) Harness/shield/tether not used

(12) Harness/shield/tether used

(19) Unknown if harness/shield/tether used

*Unknown If Designed With Harness/Shield/Tether*

(21) Harness/shield/tether not used

(22) Harness/shield/tether used

(29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used

## INJURY CONSEQUENCES

34. Injury Severity (Police Rating) 1

- (0) O - No injury
- (1) C - Possible injury
- (2) B - Nonincapacitating injury
- (3) A - Incapacitating injury
- (4) K - Killed
- (5) U - Injury, severity unknown
- (6) Died prior to accident
- (9) Unknown

35. Treatment - Mortality 4

- (0) No treatment
- (1) Fatal
- (2) Fatal - ruled disease (specify):  
\_\_\_\_\_

*Nonfatal*

- (3) Hospitalization
- (4) Transported and released
- (5) Treatment at scene - nontransported
- (6) Treatment later
- (8) Treatment - other (specify):  
\_\_\_\_\_
- (9) Unknown

36. Type Of Medical Facility (for Initial Treatment) 2

- (0) Not treated at a medical facility
- (1) Trauma center
- (2) Hospital
- (3) Medical clinic
- (4) Physician's office
- (5) Treatment later at medical facility
- (8) Other (specify):  
\_\_\_\_\_
- (9) Unknown

37. Hospital Stay 00

- (00) Not Hospitalized

\_\_\_\_\_ Code the number of days (up through 60)  
that the occupant stayed in hospital.

- (61) 61 days or more
- (99) Unknown

38. Working Days Lost 99

- \_\_\_\_\_ Code the number of days  
(up through 60) that the occupant  
lost from work due to the accident
- (00) No working days lost
  - (61) 61 days or more
  - (62) Fatally injured
  - (97) Not working prior to accident
  - (99) Unknown

**STOP - GO TO VARIABLE 44 ON PAGE 7****VARIABLES 39 THROUGH 43 ARE  
COMPLETED BY THE ZONE CENTER**39. Time to Death 00

- \_\_\_\_\_ Code number of hours from time of  
accident to time of death up through 24  
hours. If time of death is greater than 24  
hours, code number of days. (Note: 1 day =  
31, 2 days = 32, ... n days = 30 + n up  
through 30 days = 60)
- (00) Not fatal
  - (96) Fatal - ruled disease
  - (99) Unknown

40. 1st Medically Reported Cause of Death 0041. 2nd Medically Reported Cause of Death 0042. 3rd Medically Reported Cause of Death 00

- \_\_\_\_\_ Code the Occupant Injury from line  
number(s) for the medically reported  
injury(s) which reportedly contributed to  
this occupant's death
- (00) Not fatal or no additional causes
  - (97) Other result (includes fatal ruled  
disease) (specify):  
\_\_\_\_\_
  - (99) Unknown

43. Number of Recorded Injuries for  
This Occupant 01

- \_\_\_\_\_ Code the actual number of  
injuries recorded for this occupant.
- (00) No recorded injuries
  - (97) Injured, details unknown
  - (99) Unknown if injured

**AUTOMATIC BELT SYSTEM**

44. Automatic (Passive) Belt System Availability/ Function 0
- (0) Not equipped/not available
  - (1) 2 point automatic belts
  - (2) 3 point automatic belts
  - (3) Automatic belts - type unknown

*Non-functional*

- (4) Automatic belts destroyed or rendered inoperative
- (9) Unknown

45. Automatic (Passive) Belt System Use 0
- (0) Not equipped/not available/destroyed or rendered inoperative
  - (1) Automatic belt in use
  - (2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify): \_\_\_\_\_
  - (3) Automatic belt use unknown
  - (9) Unknown

46. Automatic (Passive) Belt System Type 0
- (0) Not equipped/not available
  - (1) Non-motorized system
  - (2) Motorized system
  - (9) Unknown

47. Proper Use of Automatic (Passive) Belt System 0
- (0) Not equipped/not available/not used
  - (1) Automatic belt used properly
  - (2) Automatic belt used properly with child safety seat
- Automatic Belt Used Improperly*
- (3) Automatic shoulder belt worn under arm
  - (4) Automatic shoulder belt worn behind back
  - (5) Automatic belt worn around more than one person
  - (6) Lap portion of automatic belt worn on abdomen
  - (7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify): \_\_\_\_\_
  - (8) Other improper use of automatic belt system (specify): \_\_\_\_\_
  - (9) Unknown

48. Automatic (Passive) Belt Failure Modes During Accident 0
- (0) Not equipped/not available/not in use
  - (1) No automatic belt failure(s)
  - (2) Torn webbing (stretched webbing not included)
  - (3) Broken buckle or latchplate
  - (4) Upper anchorage separated
  - (5) Other anchorage separated (specify): \_\_\_\_\_
  - (6) Broken retractor
  - (7) Combination of above (specify): \_\_\_\_\_
  - (8) Other automatic belt failure (specify): \_\_\_\_\_
  - (9) Unknown

49. Seat Orientation (this Occupant Position) 0
- (0) Occupant not seated or no seat
  - (1) Forward facing seat
  - (2) Rear facing seat
  - (3) Side facing seat (inward)
  - (4) Side facing seat (outward)
  - (8) Other (specify): \_\_\_\_\_
  - (9) Unknown

**STOP - VARIABLES 50 THROUGH 52 ARE COMPLETED BY THE ZONE CENTER**

**TRAUMA DATA**

50. Glasgow Coma Scale (GCS) Score 0 2  
(at Medical Facility)
- (00) Not injured
  - (01) Injured - not treated at medical facility
  - (02) No GCS Score at medical facility
  - (03-15) Code the actual value of the initial GCS Score recorded at medical facility.
  - (97) Injured, details unknown
  - (99) Unknown if injured
51. Was the Occupant Given Blood? 1
- (1) No - blood not given
  - (2) Yes - blood given (specify units): \_\_\_\_\_
  - (9) Unknown if blood given
52. Arterial Blood Gases (ABG) - HCO<sub>3</sub> 0 1
- (00) Not injured
  - (01) Injured, ABGs not measured or reported
  - (02-50) Code the actual value of the HCO<sub>3</sub>
  - (96) ABGs reported, HCO<sub>3</sub> unknown
  - (97) Injured, details unknown
  - (99) Unknown if injured

ARE ALL APPLICABLE MEDICAL RECORDS INCLUDED WITH INITIAL SUBMISSION?

NO [ ] YES [ ]

UPDATE CANDIDATE?

NO [ ] YES [ ]



U.S. Department of Transportation  
National Highway Traffic Safety  
Administration

# OCCUPANT INJURY FORM

Form Approved  
O.M.B. No. 2127-0021  
NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number \_\_\_\_\_

3. Vehicle Number 02

2. Case Number - Stratum 9 3-09

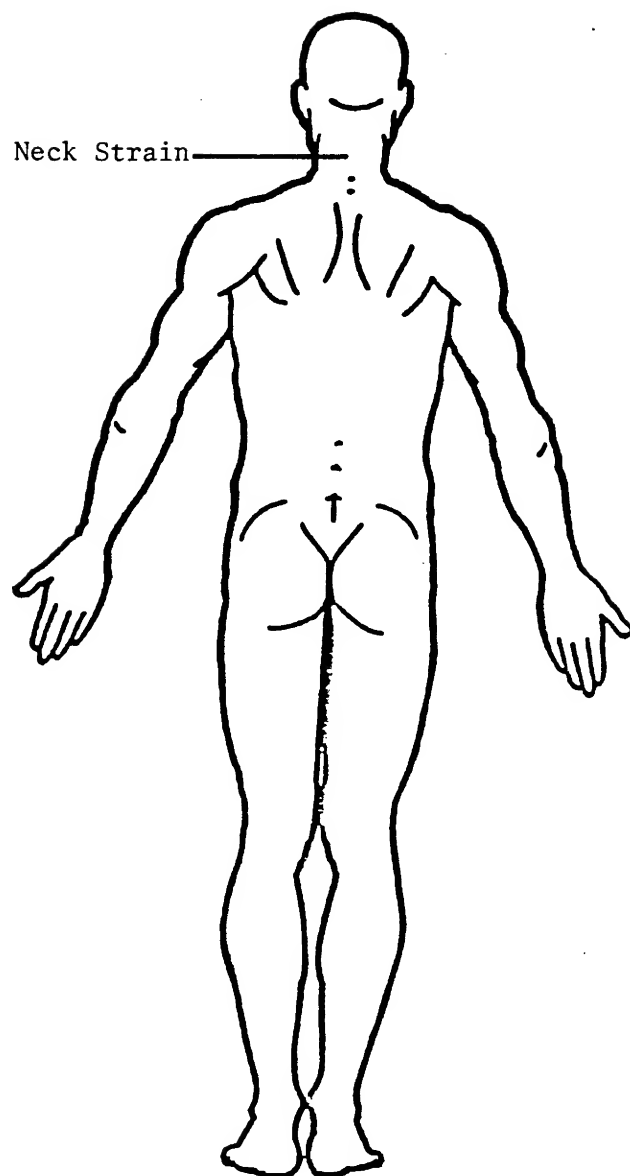
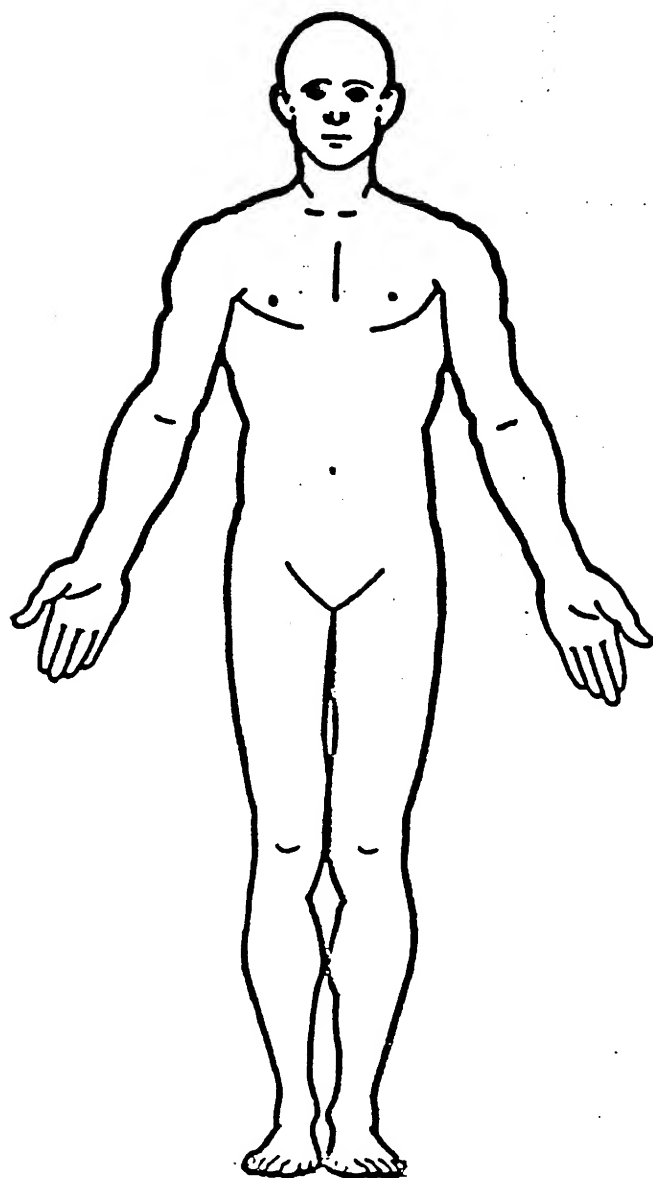
4. Occupant Number 01

## INJURY DATA

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

	Source of Injury Data	O.I.C.-A.I.S.						Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number
		Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect				
1st	5. <u>7</u>	6. <u>6</u>	7. <u>4</u>	8. <u>02</u>	9. <u>78</u>	10. <u>1</u>	11. <u>6</u>	12. <u>92</u>	13. <u>1</u>	14. <u>3</u>	15. <u>00</u>
2nd	16. ____	17. ____	18. ____	19. ____	20. ____	21. ____	22. ____	23. ____	24. ____	25. ____	26. ____
3rd	27. ____	28. ____	29. ____	30. ____	31. ____	32. ____	33. ____	34. ____	35. ____	36. ____	37. ____
4th	38. ____	39. ____	40. ____	41. ____	42. ____	43. ____	44. ____	45. ____	46. ____	47. ____	48. ____
5th	49. ____	50. ____	51. ____	52. ____	53. ____	54. ____	55. ____	56. ____	57. ____	58. ____	59. ____
6th	60. ____	61. ____	62. ____	63. ____	64. ____	65. ____	66. ____	67. ____	68. ____	69. ____	70. ____
7th	71. ____	72. ____	73. ____	74. ____	75. ____	76. ____	77. ____	78. ____	79. ____	80. ____	81. ____
8th	82. ____	83. ____	84. ____	85. ____	86. ____	87. ____	88. ____	89. ____	90. ____	91. ____	92. ____
9th	93. ____	94. ____	95. ____	96. ____	97. ____	98. ____	99. ____	100. ____	101. ____	102. ____	103. ____
10th	104. ____	105. ____	106. ____	107. ____	108. ____	109. ____	110. ____	111. ____	112. ____	113. ____	114. ____

Vehicle #2 - Driver



## SOURCE OF INJURY DATA

### OFFICIAL

- (1) Autopsy records with or without hospital/medical records
- (2) Hospital/medical records other than emergency room (e.g., discharge summary)
- (3) Emergency room records only (including associated X-rays or other lab reports)
- (4) Private physician, walk-in or emergency clinic

### UNOFFICIAL

- (5) Lay coroner report
- (6) E.M.S. personnel
- (7) Interviewee
- (8) Other source (specify): \_\_\_\_\_
- (9) Police

## INJURY SOURCE

### FRONT

- (01) Windshield
- (02) Mirror
- (03) Sunvisor
- (04) Steering wheel rim
- (05) Steering wheel hub/spoke
- (06) Steering wheel (combination of codes 04 and 05)
- (07) Steering column, transmission selector lever, other attachment
- (08) Add on equipment (e.g., CB, tape deck, air conditioner)
- (09) Left instrument panel and below
- (10) Center instrument panel and below
- (11) Right instrument panel and below
- (12) Glove compartment door
- (13) Knee bolster
- (14) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (15) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
- (16) Driver side air bag compartment cover
- (17) Passenger side air bag compartment cover
- (18) Windshield reinforced by exterior object (specify): \_\_\_\_\_
- (19) Other front object (specify): \_\_\_\_\_

### LEFT SIDE

- (20) Left side interior surface, excluding hardware or armrests
- (21) Left side hardware or armrest
- (22) Left A (A1/A2)-pillar
- (23) Left B-pillar
- (24) Other left pillar (specify): \_\_\_\_\_

- (25) Left side window glass or frame
- (26) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (27) Other left side object (specify): \_\_\_\_\_

- (28) Left side window sill

### RIGHT SIDE

- (30) Right side interior surface, excluding hardware or armrests
- (31) Right side hardware or armrest
- (32) Right A (A1/A2)-pillar
- (33) Right B-pillar
- (34) Other right pillar (specify): \_\_\_\_\_
- (35) Right side window glass or frame
- (36) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (37) Other right side object (specify): \_\_\_\_\_

- (38) Right side window sill

### INTERIOR

- (40) Seat, back support
- (41) Belt restraint webbing/buckle
- (42) Belt restraint B-pillar or door frame attachment point
- (43) Other restraint system component (specify): \_\_\_\_\_
- (44) Head restraint system
- (45) Air bag (use codes "16" and "17" for injuries sustained from air bag compartment covers)
- (46) Other occupants (specify): \_\_\_\_\_
- (47) Interior loose objects
- (48) Child safety seat (specify): \_\_\_\_\_
- (49) Other interior object (specify): \_\_\_\_\_

### ROOF

- (50) Front header
- (51) Rear header
- (52) Roof left side rail
- (53) Roof right side rail
- (54) Roof or convertible top

### FLOOR

- (56) Floor (including toe pan)
- (57) Floor or console mounted transmission lever, including console
- (58) Parking brake handle
- (59) Foot controls including parking brake

### REAR

- (60) Backlight (rear window)

- (61) Backlight storage rack, door, etc.
- (62) Other rear object (specify): \_\_\_\_\_

### EXTERIOR of OCCUPANT'S VEHICLE

- (65) Hood
- (66) Outside hardware (e.g., outside mirror, antenna)
- (67) Other exterior surface or tires (specify): \_\_\_\_\_
- (68) Unknown exterior objects

### EXTERIOR of OTHER MOTOR VEHICLE

- (70) Front bumper
- (71) Hood edge
- (72) Other front of vehicle (specify): \_\_\_\_\_

- (73) Hood
- (74) Hood ornament
- (75) Windshield, roof rail, A-pillar
- (76) Side surface
- (77) Side mirrors
- (78) Other side protrusions (specify): \_\_\_\_\_

- (79) Rear surface
- (80) Undercarriage
- (81) Tires and wheels
- (82) Other exterior of other motor vehicle (specify): \_\_\_\_\_
- (83) Unknown exterior of other motor vehicle

### OTHER VEHICLE OR OBJECT IN THE ENVIRONMENT

- (84) Ground
- (85) Other vehicle or object (specify): \_\_\_\_\_
- (86) Unknown vehicle or object

### NONCONTACT INJURY

- (90) Fire in vehicle
- (91) Flying glass
- (92) Other noncontact injury source (specify): \_\_\_\_\_
- (93) Air bag exhaust gases
- (97) Injured, unknown source

## INJURY SOURCE CONFIDENCE LEVEL

- (1) Certain
- (2) Probable
- (3) Possible
- (9) Unknown

## DIRECT/INDIRECT INJURY

- (1) Direct contact injury
- (2) Indirect contact injury
- (3) Noncontact injury
- (7) Injured, unknown source

## OCCUPANT INJURY CLASSIFICATION

### Body Region

- (1) Head
- (2) Face
- (3) Neck
- (4) Thorax
- (5) Abdomen
- (6) Spine
- (7) Upper Extremity
- (8) Lower Extremity
- (9) Unspecified

### Type of Anatomic Structure

- (1) Whole Area
- (2) Vessels
- (3) Nerves
- (4) Organs (includes muscles/ligaments)
- (5) Skeletal (includes joints)
- (6) Head - LOC
- (9) Skin

### Specific Anatomic Structure

#### Whole Area

- (02) Skin - Abrasion
- (04) Skin - Contusion
- (06) Skin - Laceration
- (08) Skin - Avulsion
- (10) Amputation
- (20) Burn
- (30) Crush
- (40) Degloving
- (50) Injury - NFS
- (90) Trauma, other than mechanical

#### Head - LOC

- (02) Length of LOC
- (04, 06, 08) Level of Consciousness
- (10) Concussion

### Spine

- (02) Cervical
- (04) Thoracic
- (06) Lumbar

Vessels, Nerves, Organs, Bones, Joints are assigned consecutive two digit numbers beginning with 02

### Level of Injury

Specific injuries are assigned consecutive two-digit numbers beginning with 02.

To the extent possible, within the organizational framework of the AIS, 00 is assigned to an injury NFS as to severity or where only one injury is given in the dictionary for that anatomic structure. 99 is assigned to any injury NFS as to lesion or severity.

### Abbreviated Injury Scale

- (1) Minor injury
- (2) Moderate injury
- (3) Serious injury
- (4) Severe injury
- (5) Critical injury
- (6) Maximum (untreatable)
- (7) Injured, unknown severity

### Aspect

- (1) Right
- (2) Left
- (3) Bilateral
- (4) Central
- (5) Anterior
- (6) Posterior
- (7) Superior
- (8) Inferior
- (9) Unknown
- (0) Whole region





# OCCUPANT ASSESSMENT FORM

## OCCUPANT'S SEATING

1. Primary Sampling Unit Number

2. Case Number - Stratum

3. Vehicle Number

4. Occupant Number

## OCCUPANT'S CHARACTERISTICS

5. Occupant's Age

Code actual age at time of accident.

(00) Less than one year old (specify by month):

(97) 97 years and older

(99) Unknown

6. Occupant's Sex

(1) Male

(2) Female

(9) Unknown

7. Occupant's Height

Code actual height to the nearest  
centimeter.

(999) Unknown

57 inches X 2.54 = 145 centimeters

8. Occupant's Weight

Code actual weight to the nearest  
kilogram.

(999) Unknown

065 pounds X .4536 = 032 kilograms

9. Occupant's Role

(1) Driver

(2) Passenger

(9) Unknown

10. Occupant's Seat Position

*Front Seat*

(11) Left side

(12) Middle

(13) Right side

(14) Other (specify):

(15) On or in the lap of another occupant

*Second Seat*

(21) Left side

(22) Middle

(23) Right side

(24) Other (specify):

(25) On or in the lap of another occupant

*Third Seat*

(31) Left side

(32) Middle

(33) Right side

(34) Other (specify):

(35) On or in the lap of another occupant

*Fourth Seat*

(41) Left side

(42) Middle

(43) Right side

(44) Other (specify):

(45) On or in the lap of another occupant

(97) In or on unenclosed area

(98) Other seat (specify):

(99) Unknown

11. Occupant's Posture

(0) Normal posture

*Abnormal posture*

(1) Kneeling or standing on seat

(2) Lying on or across seat

(3) Kneeling, standing or sitting in front of seat

(4) Sitting sideways or turned to talk with another  
occupant or to look out a rear window

(5) Sitting on a console

(6) Lying back in a reclined seat position

(7) Bracing with feet or hands on a surface in front  
of seat

(8) Other abnormal posture (specify):

Leaving on door sill (Baron on window sill)

(9) Unknown

## EJECTION/ENTRAPMENT

12. Ejection 0

- (0) No ejection
- (1) Complete ejection
- (2) Partial ejection
- (3) Ejection, unknown degree
- (9) Unknown

15. Medium Status (Immediately Prior To Impact) 0

- (0) No ejection
- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

13. Ejection Area 0

- (0) No ejection
- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear
- (7) Roof
- (8) Other area (e.g., back of pickup, etc.)  
(specify): \_\_\_\_\_
- (9) Unknown

16. Entrapment 0

(NOTE: Entrapped means that part of the person was in the vehicle and mechanically restrained; jammed doors and immobilizing injuries by themselves are not sufficient to constitute entrapment.)

- (0) Not entrapped
- (1) Entrapped
- (9) Unknown

14. Ejection Medium 0

- (0) No ejection
- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify): \_\_\_\_\_
- (5) Integral structure
- (8) Other medium (specify): \_\_\_\_\_
- (9) Unknown

## RESTRAINT SYSTEM EVALUATION

17. Manual (Active) Belt System Availability 4

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available—type unknown

*Integral Belt Partially Destroyed*

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)

(8) Other belt (specify): \_\_\_\_\_

(9) Unknown \_\_\_\_\_

18. Manual (Active) Belt System Use 00

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperative (specify): \_\_\_\_\_

(02) Shoulder belt \_\_\_\_\_

(03) Lap belt \_\_\_\_\_

(04) Lap and shoulder belt \_\_\_\_\_

(05) Belt used—type unknown \_\_\_\_\_

(08) Other belt used (specify): \_\_\_\_\_

(12) Shoulder belt used with child safety seat \_\_\_\_\_

(13) Lap belt used with child safety seat \_\_\_\_\_

(14) Lap and shoulder belt used with child safety seat \_\_\_\_\_

(15) Belt used with child safety seat—type unknown \_\_\_\_\_

(18) Other belt used with child safety seat (specify): \_\_\_\_\_

(99) Unknown if belt used \_\_\_\_\_

19. Proper Use of Manual (Active) Belts 0

- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child safety seat

*Belt Used Improperly*

- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): \_\_\_\_\_

(8) Other improper use of manual belt system (specify): \_\_\_\_\_

(9) Unknown \_\_\_\_\_

20. Manual (Active) Belt Failure Modes During Accident 0

- (0) No manual belt used
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): \_\_\_\_\_

(6) Broken retractor \_\_\_\_\_

(7) Combination of above (specify): \_\_\_\_\_

(8) Other manual belt failure (specify): \_\_\_\_\_

(9) Unknown \_\_\_\_\_

21. Air Bag System Availability/Function 0

- (0) Not equipped/not available
- (1) Air bag

*Non-functional*

(2) Air bag disconnected (specify): \_\_\_\_\_

(3) Air bag not reinstalled \_\_\_\_\_

(9) Unknown \_\_\_\_\_

22. Air Bag System Deployment 0

- (0) Not equipped/not available
- (1) Air bag deployed during accident (as a result of impact)
- (2) Air bag deployed inadvertently just prior to accident
- (3) Air bag deployed, accident sequence undetermined
- (4) Nondeployed
- (5) Unknown if deployed
- (6) Air bag deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
- (9) Unknown

23. Are There Indications of Air Bag System Failure? 0

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify): \_\_\_\_\_

(9) Unknown \_\_\_\_\_

Note: See Variables 44 through 48 (Page 5) for Information on Automatic Belts

24. Police Reported Restraint Use 0

- (0) None used
- (1) Police did not indicate restraint use
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt used, type not specified
- (6) Child safety seat
- (7) Other or automatic restraint (specify): \_\_\_\_\_

(8) Restrained, type unknown \_\_\_\_\_

(9) Police indicated "unknown" \_\_\_\_\_

## HEAD RESTRAINT AND SEAT EVALUATION

25. Head Restraint Type/Damage by Occupant  
at This Occupant Position 3

- (0) No head restraints
- (1) Integral—no damage
- (2) Integral—damaged during accident
- (3) Adjustable—no damage
- (4) Adjustable—damaged during accident
- (5) Add-on—no damage
- (6) Add-on—damaged during accident
- (8) Other (specify): \_\_\_\_\_
- (9) Unknown

26. Seat Type (this Occupant Position) 07

- (00) Occupant not seated or no seat
- (01) Bucket
- (02) Bucket with folding back
- (03) Bench
- (04) Bench with separate back cushions
- (05) Bench with folding back(s)
- (06) Split bench with separate back cushions
- (07) Split bench with folding back(s)
- (08) Pedestal (i.e., column supported)
- (09) Other seat type (specify): \_\_\_\_\_
- (10) Box mounted seat (i.e., van type)
- (99) Unknown

27. Seat Performance (this Occupant Position) 1

- (0) Occupant not seated or no seat
- (1) No seat performance failure(s)
- (2) Seat adjusters failed
- (3) Seat back folding locks or "seat back" failed
- (4) Seat track/anchors failed
- (5) Deformed by impact of occupant
- (6) Deformed by passenger compartment intrusion (specify): \_\_\_\_\_
- (7) Combination of above (specify): \_\_\_\_\_
- (8) Other (specify): \_\_\_\_\_
- (9) Unknown

## CHILD SAFETY SEAT

28. Child Safety Seat Make/Model 000

(000) No child safety seat

Applicable codes are found in your NASS CDS  
Data Collection, Coding and Editing

(950) Built-in child safety seat

(997) Other make/model (specify):  
\_\_\_\_\_

(998) Unknown make/model

(999) Unknown if child safety seat used

29. Type of Child Safety Seat 0

(0) No child safety seat

(1) Infant seat

(2) Toddler seat

(3) Convertible seat

(4) Booster seat

(7) Other type child safety seat (specify):  
\_\_\_\_\_

(8) Unknown child safety seat type

(9) Unknown if child safety seat used

30. Child Safety Seat Orientation 00

(00) No child safety seat

*Designed for Rear Facing for This Age/Weight*

(01) Rear facing

(02) Forward facing

(08) Other orientation (specify):  
\_\_\_\_\_

(09) Unknown orientation

*Designed For Forward Facing for This Age/Weight*

(11) Rear facing

(12) Forward facing

(18) Other orientation (specify):  
\_\_\_\_\_

(19) Unknown orientation

*Unknown Design or Orientation For This  
Age/Weight, or Unknown Age/Weight*

(21) Rear facing

(22) Forward facing

(28) Other orientation (specify):  
\_\_\_\_\_

(29) Unknown orientation

(99) Unknown if child safety seat used

31. Child Safety Seat Harness Usage 0032. Child Safety Seat Shield Usage 0033. Child Safety Seat Tether Usage 00Note: Options below applicable to  
Variables OA31-OA33.

(00) No child safety seat

*Not Designed With Harness/Shield/Tether*(01) After market harness/shield/tether  
added, not used

(02) After market harness/shield/tether used

(03) Child safety seat used, but no after market  
harness/shield/tether added(09) Unknown if harness/shield/tether  
added or used*Designed With Harness/Shield/Tether*

(11) Harness/shield/tether not used

(12) Harness/shield/tether used

(19) Unknown if harness/shield/tether used

*Unknown If Designed With Harness/Shield/Tether*

(21) Harness/shield/tether not used

(22) Harness/shield/tether used

(29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used

## INJURY CONSEQUENCES

34. Injury Severity (Police Rating) 0

- (0) O - No injury
- (1) C - Possible injury
- (2) B - Nonincapacitating injury
- (3) A - Incapacitating injury
- (4) K - Killed
- (5) U - Injury, severity unknown
- (6) Died prior to accident
- (9) Unknown

35. Treatment - Mortality 0

- (0) No treatment
- (1) Fatal
- (2) Fatal - ruled disease (specify):  
\_\_\_\_\_

*Nonfatal*

- (3) Hospitalization
- (4) Transported and released
- (5) Treatment at scene - nontransported
- (6) Treatment later
- (8) Treatment - other (specify):  
\_\_\_\_\_
- (9) Unknown

36. Type Of Medical Facility (for Initial Treatment) 0

- (0) Not treated at a medical facility
- (1) Trauma center
- (2) Hospital
- (3) Medical clinic
- (4) Physician's office
- (5) Treatment later at medical facility
- (8) Other (specify):  
\_\_\_\_\_
- (9) Unknown

37. Hospital Stay 00

- (00) Not Hospitalized

Code the number of days (up through 60) that the occupant stayed in hospital.

- (61) 61 days or more
- (99) Unknown

38. Working Days Lost 00

Code the number of days (up through 60) that the occupant lost from work due to the accident

- (00) No working days lost
- (61) 61 days or more
- (62) Fatally injured
- (97) Not working prior to accident
- (99) Unknown

**STOP - GO TO VARIABLE 44 ON PAGE 7****VARIABLES 39 THROUGH 43 ARE COMPLETED BY THE ZONE CENTER**39. Time to Death 00

Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 + n up through 30 days = 60)

- (00) Not fatal
- (96) Fatal - ruled disease
- (99) Unknown

40. 1st Medically Reported Cause of Death 0041. 2nd Medically Reported Cause of Death 0042. 3rd Medically Reported Cause of Death 00

Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death

- (00) Not fatal or no additional causes
- (97) Other result (includes fatal ruled disease) (specify):  
\_\_\_\_\_

(99) Unknown

43. Number of Recorded Injuries for This Occupant 01

Code the actual number of injuries recorded for this occupant.

- (00) No recorded injuries
- (97) Injured, details unknown
- (99) Unknown if injured

**AUTOMATIC BELT SYSTEM**44. Automatic (Passive) Belt System Availability/ Function 0

- (0) Not equipped/not available
- (1) 2 point automatic belts
- (2) 3 point automatic belts
- (3) Automatic belts - type unknown

*Non-functional*

- (4) Automatic belts destroyed or rendered inoperative
- (9) Unknown

45. Automatic (Passive) Belt System Use 0

- (0) Not equipped/not available/destroyed or rendered inoperative
- (1) Automatic belt in use
- (2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify): \_\_\_\_\_

- (3) Automatic belt use unknown
- (9) Unknown

46. Automatic (Passive) Belt System Type 0

- (0) Not equipped/not available
- (1) Non-motorized system
- (2) Motorized system
- (9) Unknown

47. Proper Use of Automatic (Passive) Belt System 0

- (0) Not equipped/not available/not used
- (1) Automatic belt used properly
- (2) Automatic belt used properly with child safety seat

*Automatic Belt Used Improperly*

- (3) Automatic shoulder belt worn under arm
- (4) Automatic shoulder belt worn behind back
- (5) Automatic belt worn around more than one person
- (6) Lap portion of automatic belt worn on abdomen
- (7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify): \_\_\_\_\_

- (8) Other improper use of automatic belt system (specify): \_\_\_\_\_
- (9) Unknown

48. Automatic (Passive) Belt Failure Modes During Accident 0

- (0) Not equipped/not available/not in use
- (1) No automatic belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): \_\_\_\_\_

- (6) Broken retractor
- (7) Combination of above (specify): \_\_\_\_\_
- (8) Other automatic belt failure (specify): \_\_\_\_\_

- (9) Unknown

49. Seat Orientation (this Occupant Position) 1

- (0) Occupant not seated or no seat
- (1) Forward facing seat
- (2) Rear facing seat
- (3) Side facing seat (inward)
- (4) Side facing seat (outward)
- (8) Other (specify): \_\_\_\_\_

- (9) Unknown

**STOP - VARIABLES 50 THROUGH 52 ARE COMPLETED BY THE ZONE CENTER****TRAUMA DATA**50. Glasgow Coma Scale (GCS) Score 0 1  
(at Medical Facility)

- (00) Not injured
- (01) Injured - not treated at medical facility
- (02) No GCS Score at medical facility
- (03-15) Code the actual value of the initial GCS Score recorded at medical facility.
- (97) Injured, details unknown
- (99) Unknown if injured

51. Was the Occupant Given Blood? 1

- (1) No - blood not given
- (2) Yes - blood given (specify units): \_\_\_\_\_
- (9) Unknown if blood given

52. Arterial Blood Gases (ABG) - HCO<sub>3</sub> 0 1

- (00) Not injured
- (01) Injured, ABGs not measured or reported
- (02-50) Code the actual value of the HCO<sub>3</sub>
- (96) ABGs reported, HCO<sub>3</sub> unknown
- (97) Injured, details unknown
- (99) Unknown if injured

ARE ALL APPLICABLE MEDICAL RECORDS INCLUDED WITH INITIAL SUBMISSION?

NO [ ] YES [ ]

UPDATE CANDIDATE?

NO [ ] YES [ ]





U.S. Department of Transportation  
National Highway Traffic Safety  
Administration

## OCCUPANT INJURY FORM

BEST AVAILABLE COPY  
Form Approved  
O.M.B. No. 2127-0021  
NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number

3. Vehicle Number

2. Case Number - Stratum

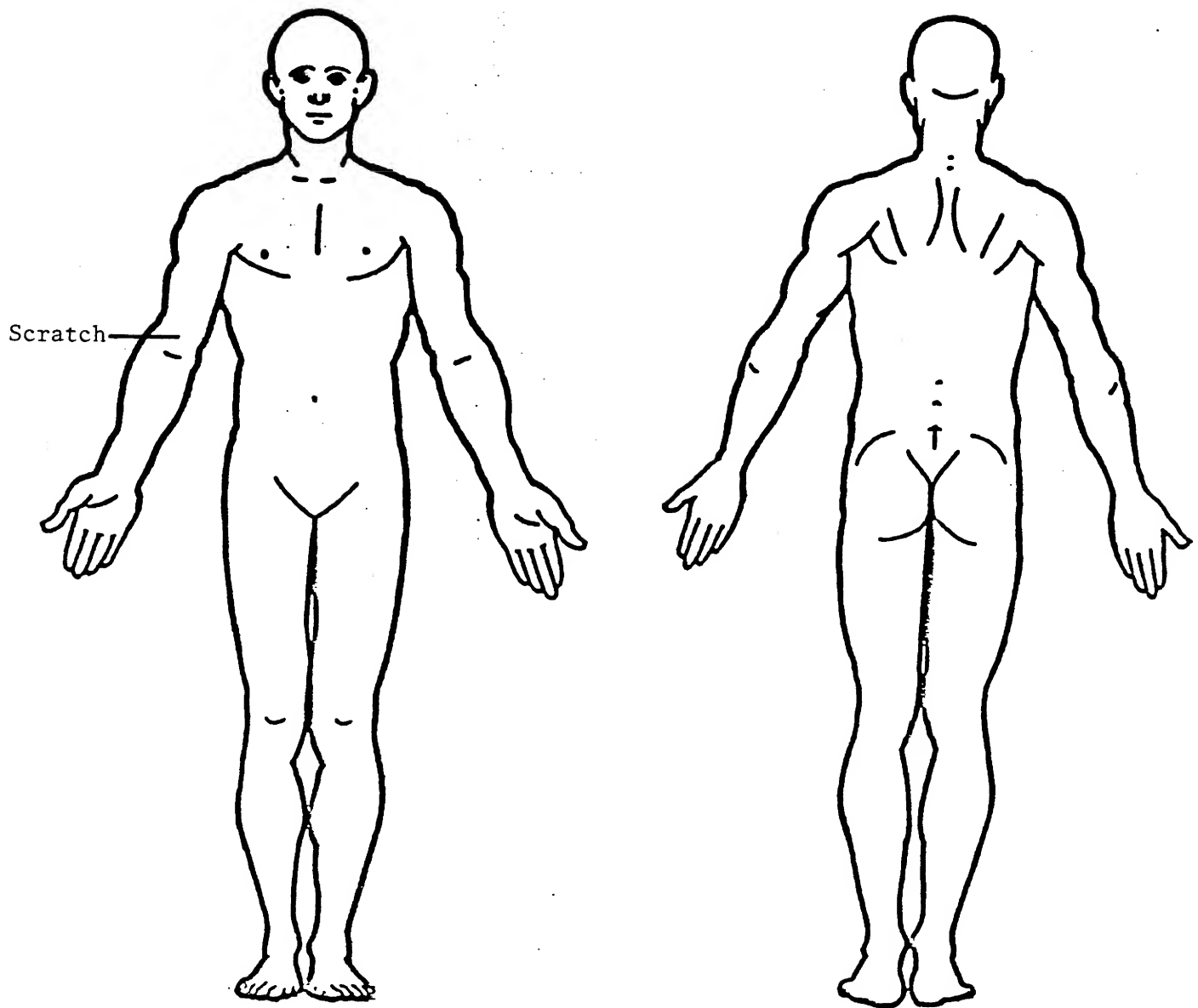
4. Occupant Number

### INJURY DATA

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

	Source of Injury Data	O.I.C.-A.I.S						Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number
		Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect				
1st	5. <u>1</u>	6. <u>1</u>	7. <u>9</u>	8. <u>06</u>	9. <u>00</u>	10. <u>1</u>	11. <u>1</u>	12. <u>49</u> <i>Door Lock button</i>	13. <u>1</u>	14. <u>1</u>	15. <u>00</u>
2nd	16. ____	17. ____	18. ____	19. ____	20. ____	21. ____	22. ____	23. ____	24. ____	25. ____	26. ____
3rd	27. ____	28. ____	29. ____	30. ____	31. ____	32. ____	33. ____	34. ____	35. ____	36. ____	37. ____
4th	38. ____	39. ____	40. ____	41. ____	42. ____	43. ____	44. ____	45. ____	46. ____	47. ____	48. ____
5th	49. ____	50. ____	51. ____	52. ____	53. ____	54. ____	55. ____	56. ____	57. ____	58. ____	59. ____
6th	60. ____	61. ____	62. ____	63. ____	64. ____	65. ____	66. ____	67. ____	68. ____	69. ____	70. ____
7th	71. ____	72. ____	73. ____	74. ____	75. ____	76. ____	77. ____	78. ____	79. ____	80. ____	81. ____
8th	82. ____	83. ____	84. ____	85. ____	86. ____	87. ____	88. ____	89. ____	90. ____	91. ____	92. ____
9th	93. ____	94. ____	95. ____	96. ____	97. ____	98. ____	99. ____	100. ____	101. ____	102. ____	103. ____
10th	104. ____	105. ____	106. ____	107. ____	108. ____	109. ____	110. ____	111. ____	112. ____	113. ____	114. ____

Vehicle #2 - Right Front Occupant



**SOURCE OF INJURY DATA****OFFICIAL**

- (1) Autopsy records with or without hospital/medical records
- (2) Hospital/medical records other than emergency room (e.g., discharge summary)
- (3) Emergency room records only (including associated X-rays or other lab reports)
- (4) Private physician, walk-in or emergency clinic

**UNOFFICIAL**

- (5) Lay coroner report
- (6) E.M.S. personnel
- (7) Interviewee
- (8) Other source (specify): \_\_\_\_\_
- (9) Police

**INJURY SOURCE****FRONT**

- (01) Windshield
- (02) Mirror
- (03) Sunvisor
- (04) Steering wheel rim
- (05) Steering wheel hub/spoke
- (06) Steering wheel (combination of codes 04 and 05)
- (07) Steering column, transmission selector lever, other attachment
- (08) Add on equipment (e.g., CB, tape deck, air conditioner)
- (09) Left instrument panel and below
- (10) Center instrument panel and below
- (11) Right instrument panel and below
- (12) Glove compartment door
- (13) Knee bolster
- (14) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (15) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
- (16) Driver side air bag compartment cover
- (17) Passenger side air bag compartment cover
- (18) Windshield reinforced by exterior object (specify): \_\_\_\_\_
- (19) Other front object (specify): \_\_\_\_\_

**LEFT SIDE**

- (20) Left side interior surface, excluding hardware or armrests
- (21) Left side hardware or armrest
- (22) Left A (A1/A2)-pillar
- (23) Left B-pillar
- (24) Other left pillar (specify): \_\_\_\_\_

- (25) Left side window glass or frame
- (26) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (27) Other left side object (specify): \_\_\_\_\_

- (28) Left side window sill

**RIGHT SIDE**

- (30) Right side interior surface, excluding hardware or armrests
- (31) Right side hardware or armrest
- (32) Right A (A1/A2)-pillar
- (33) Right B-pillar
- (34) Other right pillar (specify): \_\_\_\_\_

- (35) Right side window glass or frame
- (36) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (37) Other right side object (specify): \_\_\_\_\_

- (38) Right side window sill

**INTERIOR**

- (40) Seat, back support
- (41) Belt restraint webbing/buckle
- (42) Belt restraint B-pillar or door frame attachment point
- (43) Other restraint system component (specify): \_\_\_\_\_
- (44) Head restraint system
- (45) Air bag (use codes "16" and "17" for injuries sustained from air bag compartment covers)
- (46) Other occupants (specify): \_\_\_\_\_
- (47) Interior loose objects
- (48) Child safety seat (specify): \_\_\_\_\_
- (49) Other interior object (specify): \_\_\_\_\_

**ROOF**

- (50) Front header
- (51) Rear header
- (52) Roof left side rail
- (53) Roof right side rail
- (54) Roof or convertible top

**FLOOR**

- (56) Floor (including toe pan)
- (57) Floor or console mounted transmission lever, including console
- (58) Parking brake handle
- (59) Foot controls including parking brake

**REAR**

- (60) Backlight (rear window)

- (61) Backlight storage rack, door, etc.
- (62) Other rear object (specify): \_\_\_\_\_

**EXTERIOR of OCCUPANT'S VEHICLE**

- (65) Hood
- (66) Outside hardware (e.g., outside mirror, antenna)
- (67) Other exterior surface or tires (specify): \_\_\_\_\_
- (68) Unknown exterior objects

**EXTERIOR of OTHER MOTOR VEHICLE**

- (70) Front bumper
- (71) Hood edge
- (72) Other front of vehicle (specify): \_\_\_\_\_

- (73) Hood
- (74) Hood ornament
- (75) Windshield, roof rail, A-pillar
- (76) Side surface
- (77) Side mirrors
- (78) Other side protrusions (specify): \_\_\_\_\_

- (79) Rear surface
- (80) Undercarriage
- (81) Tires and wheels
- (82) Other exterior of other motor vehicle (specify): \_\_\_\_\_

- (83) Unknown exterior of other motor vehicle

**OTHER VEHICLE or OBJECT IN THE ENVIRONMENT**

- (84) Ground
- (85) Other vehicle or object (specify): \_\_\_\_\_
- (86) Unknown vehicle or object

**NONCONTACT INJURY**

- (90) Fire in vehicle
- (91) Flying glass
- (92) Other noncontact injury source (specify): \_\_\_\_\_
- (93) Air bag exhaust gases
- (97) Injured, unknown source

**INJURY SOURCE CONFIDENCE LEVEL**

- (1) Certain
- (2) Probable
- (3) Possible
- (9) Unknown

**DIRECT/INDIRECT INJURY**

- (1) Direct contact injury
- (2) Indirect contact injury
- (3) Noncontact injury
- (7) Injured, unknown source

**OCCUPANT INJURY CLASSIFICATION****Body Region**

- (1) Head
- (2) Face
- (3) Neck
- (4) Thorax
- (5) Abdomen
- (6) Spine
- (7) Upper Extremity
- (8) Lower Extremity
- (9) Unspecified

**Type of Anatomic Structure**

- (1) Whole Area
- (2) Vessels
- (3) Nerves
- (4) Organs (includes muscles/ligaments)
- (5) Skeletal (includes joints)
- (6) Head - LOC
- (9) Skin

**Specific Anatomic Structure****Whole Area**

- (02) Skin - Abrasion
- (04) Skin - Contusion
- (06) Skin - Laceration
- (08) Skin - Avulsion
- (10) Amputation
- (20) Burn
- (30) Crush
- (40) Degloving
- (50) Injury - NFS
- (90) Trauma, other than mechanical

**Head - LOC**

- (02) Length of LOC
- (04, 06, 08) Level of Consciousness
- (10) Concussion

**Spine**

- (02) Cervical
- (04) Thoracic
- (06) Lumbar

Vessels, Nerves, Organs, Bones, Joints are assigned consecutive two digit numbers beginning with 02

**Level of Injury**

Specific injuries are assigned consecutive two-digit numbers beginning with 02.

To the extent possible, within the organizational framework of the AIS, 00 is assigned to an injury NFS as to severity or where only one injury is given in the dictionary for that anatomic structure. 99 is assigned to any injury NFS as to lesion or severity.

**Abbreviated Injury Scale**

- (1) Minor injury
- (2) Moderate injury
- (3) Serious injury
- (4) Severe injury
- (5) Critical injury
- (6) Maximum (untreatable)
- (7) Injured, unknown severity

**Aspect**

- (1) Right
- (2) Left
- (3) Bilateral
- (4) Central
- (5) Anterior
- (6) Posterior
- (7) Superior
- (8) Inferior
- (9) Unknown
- (0) Whole region



U.S. Department of Transportation  
National Highway Traffic Safety  
Administration

# OCCUPANT ASSESSMENT FORM

Form Approved  
O.M.B. No. 2127-0021

NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM

## OCCUPANT'S SEATING

1. Primary Sampling Unit Number \_\_\_\_\_

2. Case Number - Stratum 93-09

3. Vehicle Number 02

4. Occupant Number 03

## OCCUPANT'S CHARACTERISTICS

5. Occupant's Age 13

Code actual age at time of accident.

(00) Less than one year old (specify by month): \_\_\_\_\_

(97) 97 years and older \_\_\_\_\_

(99) Unknown \_\_\_\_\_

6. Occupant's Sex 2

(1) Male

(2) Female

(9) Unknown

7. Occupant's Height 160

Code actual height to the nearest centimeter.

(999) Unknown

63 inches X 2.54 = 160 centimeters

8. Occupant's Weight \_\_\_\_\_

Code actual weight to the nearest kilogram.

(999) Unknown

120 pounds X .4536 = 054 kilograms

9. Occupant's Role \_\_\_\_\_

(1) Driver

(2) Passenger

(9) Unknown

10. Occupant's Seat Position 23

*Front Seat*

(11) Left side

(12) Middle

(13) Right side

(14) Other (specify): \_\_\_\_\_

(15) On or in the lap of another occupant

*Second Seat*

(21) Left side

(22) Middle

(23) Right side

(24) Other (specify): \_\_\_\_\_

(25) On or in the lap of another occupant

*Third Seat*

(31) Left side

(32) Middle

(33) Right side

(34) Other (specify): \_\_\_\_\_

(35) On or in the lap of another occupant

*Fourth Seat*

(41) Left side

(42) Middle

(43) Right side

(44) Other (specify): \_\_\_\_\_

(45) On or in the lap of another occupant

(97) In or on unenclosed area

(98) Other seat (specify): \_\_\_\_\_

(99) Unknown

11. Occupant's Posture 0

(0) Normal posture

*Abnormal posture*

(1) Kneeling or standing on seat

(2) Lying on or across seat

(3) Kneeling, standing or sitting in front of seat

(4) Sitting sideways or turned to talk with another occupant or to look out a rear window

(5) Sitting on a console

(6) Lying back in a reclined seat position

(7) Bracing with feet or hands on a surface in front of seat

(8) Other abnormal posture (specify): \_\_\_\_\_

(9) Unknown

## National Accident Sampling System-Crashworthiness Data System: Occupant Assessment Form

Page 2

## EJECTION/ENTRAPMENT

12. Ejection 0

- (0) No ejection
- (1) Complete ejection
- (2) Partial ejection
- (3) Ejection, unknown degree
- (9) Unknown

13. Ejection Area 0

- (0) No ejection
- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear
- (7) Roof
- (8) Other area (e.g., back of pickup, etc.)  
(specify): \_\_\_\_\_
- (9) Unknown

14. Ejection Medium 0

- (0) No ejection
- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify): \_\_\_\_\_
- (5) Integral structure
- (8) Other medium (specify): \_\_\_\_\_
- (9) Unknown

15. Medium Status (Immediately Prior To Impact) 0

- (0) No ejection
- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

16. Entrapment 0

(NOTE: Entrapped means that part of the person was in the vehicle and mechanically restrained; jammed doors and immobilizing injuries by themselves are not sufficient to constitute entrapment.)

- (0) Not entrapped
- (1) Entrapped
- (9) Unknown

## RESTRAINT SYSTEM EVALUATION

17. Manual (Active) Belt System Availability 3

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available—type unknown

*Integral Belt Partially Destroyed*

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)

(8) Other belt (specify): \_\_\_\_\_

(9) Unknown \_\_\_\_\_

18. Manual (Active) Belt System Use 00

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperative (specify): \_\_\_\_\_

(02) Shoulder belt \_\_\_\_\_

(03) Lap belt \_\_\_\_\_

(04) Lap and shoulder belt \_\_\_\_\_

(05) Belt used—type unknown \_\_\_\_\_

(08) Other belt used (specify): \_\_\_\_\_

(12) Shoulder belt used with child safety seat \_\_\_\_\_

(13) Lap belt used with child safety seat \_\_\_\_\_

(14) Lap and shoulder belt used with child safety seat \_\_\_\_\_

(15) Belt used with child safety seat—type unknown \_\_\_\_\_

(18) Other belt used with child safety seat (specify): \_\_\_\_\_

(99) Unknown if belt used \_\_\_\_\_

19. Proper Use of Manual (Active) Belts 0

- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child safety seat

*Belt Used Improperly*

- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): \_\_\_\_\_

(8) Other improper use of manual belt system (specify): \_\_\_\_\_

(9) Unknown \_\_\_\_\_

20. Manual (Active) Belt Failure Modes During Accident 0

- (0) No manual belt used
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): \_\_\_\_\_

(6) Broken retractor \_\_\_\_\_

(7) Combination of above (specify): \_\_\_\_\_

(8) Other manual belt failure (specify): \_\_\_\_\_

(9) Unknown \_\_\_\_\_

21. Air Bag System Availability/Function 0

- (0) Not equipped/not available
- (1) Air bag

*Non-functional*

(2) Air bag disconnected (specify): \_\_\_\_\_

(3) Air bag not reinstalled \_\_\_\_\_

(9) Unknown \_\_\_\_\_

22. Air Bag System Deployment 0

- (0) Not equipped/not available
- (1) Air bag deployed during accident (as a result of impact)
- (2) Air bag deployed inadvertently just prior to accident
- (3) Air bag deployed, accident sequence undetermined
- (4) Nondeployed
- (5) Unknown if deployed
- (6) Air bag deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
- (9) Unknown

23. Are There Indications of Air Bag System Failure? 0

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify): \_\_\_\_\_

(9) Unknown \_\_\_\_\_

Note: See Variables 44 through 48 (Page 5) for Information on Automatic Belts

24. Police Reported Restraint Use 0

- (0) None used
- (1) Police did not indicate restraint use
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt used, type not specified
- (6) Child safety seat
- (7) Other or automatic restraint (specify): \_\_\_\_\_

(8) Restrained, type unknown \_\_\_\_\_

(9) Police indicated "unknown" \_\_\_\_\_

## HEAD RESTRAINT AND SEAT EVALUATION

25. Head Restraint Type/Damage by Occupant  
at This Occupant Position0

- (0) No head restraints
- (1) Integral—no damage
- (2) Integral—damaged during accident
- (3) Adjustable—no damage
- (4) Adjustable—damaged during accident
- (5) Add-on—no damage
- (6) Add-on—damaged during accident
- (8) Other (specify): \_\_\_\_\_
- (9) Unknown

26. Seat Type (this Occupant Position)

03

- (00) Occupant not seated or no seat
- (01) Bucket
- (02) Bucket with folding back
- (03) Bench
- (04) Bench with separate back cushions
- (05) Bench with folding back(s)
- (06) Split bench with separate back cushions
- (07) Split bench with folding back(s)
- (08) Pedestal (i.e., column supported)
- (09) Other seat type (specify): \_\_\_\_\_
- (10) Box mounted seat (i.e., van type)
- (99) Unknown

27. Seat Performance (this Occupant Position)

1

- (0) Occupant not seated or no seat
- (1) No seat performance failure(s)
- (2) Seat adjusters failed
- (3) Seat back folding locks or "seat back" failed
- (4) Seat track/anchors failed
- (5) Deformed by impact of occupant
- (6) Deformed by passenger compartment intrusion (specify): \_\_\_\_\_

(7) Combination of above (specify): \_\_\_\_\_

(8) Other (specify): \_\_\_\_\_

(9) Unknown



## CHILD SAFETY SEAT

28. Child Safety Seat Make/Model 000

(000) No child safety seat

Applicable codes are found in your NASS CDS Data Collection, Coding and Editing

(950) Built-in child safety seat

(997) Other make/model (specify): \_\_\_\_\_

(998) Unknown make/model

(999) Unknown if child safety seat used

29. Type of Child Safety Seat 0

(0) No child safety seat

(1) Infant seat

(2) Toddler seat

(3) Convertible seat

(4) Booster seat

(7) Other type child safety seat (specify): \_\_\_\_\_

(8) Unknown child safety seat type

(9) Unknown if child safety seat used

30. Child Safety Seat Orientation 00

(00) No child safety seat

*Designed for Rear Facing for This Age/Weight*

(01) Rear facing

(02) Forward facing

(08) Other orientation (specify): \_\_\_\_\_

(09) Unknown orientation

*Designed For Forward Facing for This Age/Weight*

(11) Rear facing

(12) Forward facing

(18) Other orientation (specify): \_\_\_\_\_

(19) Unknown orientation

*Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight*

(21) Rear facing

(22) Forward facing

(28) Other orientation (specify): \_\_\_\_\_

(29) Unknown orientation

(99) Unknown if child safety seat used

31. Child Safety Seat Harness Usage 0032. Child Safety Seat Shield Usage 0033. Child Safety Seat Tether Usage 00

Note: Options below applicable to Variables OA31-OA33.

(00) No child safety seat

*Not Designed With Harness/Shield/Tether*

(01) After market harness/shield/tether added, not used

(02) After market harness/shield/tether used

(03) Child safety seat used, but no after market harness/shield/tether added

(09) Unknown if harness/shield/tether added or used

*Designed With Harness/Shield/Tether*

(11) Harness/shield/tether not used

(12) Harness/shield/tether used

(19) Unknown if harness/shield/tether used

*Unknown If Designed With Harness/Shield/Tether*

(21) Harness/shield/tether not used

(22) Harness/shield/tether used

(29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used

**INJURY CONSEQUENCES****34. Injury Severity (Police Rating)** 0

- (0) O - No injury
- (1) C - Possible injury
- (2) B - Nonincapacitating injury
- (3) A - Incapacitating injury
- (4) K - Killed
- (5) U - Injury, severity unknown
- (6) Died prior to accident
- (9) Unknown

**35. Treatment - Mortality** 0

- (0) No treatment
- (1) Fatal
- (2) Fatal - ruled disease (specify):  
\_\_\_\_\_

*Nonfatal*

- (3) Hospitalization
- (4) Transported and released
- (5) Treatment at scene - nontransported
- (6) Treatment later
- (8) Treatment - other (specify):  
\_\_\_\_\_
- (9) Unknown

**36. Type Of Medical Facility (for Initial Treatment)** 0

- (0) Not treated at a medical facility
- (1) Trauma center
- (2) Hospital
- (3) Medical clinic
- (4) Physician's office
- (5) Treatment later at medical facility
- (8) Other (specify):  
\_\_\_\_\_
- (9) Unknown

**37. Hospital Stay** 00

- (00) Not Hospitalized
- \_\_\_\_\_ Code the number of days (up through 60) that the occupant stayed in hospital.
- (61) 61 days or more
- (99) Unknown

**38. Working Days Lost** 00

- \_\_\_\_\_ Code the number of days (up through 60) that the occupant lost from work due to the accident
- (00) No working days lost
- (61) 61 days or more
- (62) Fatally injured
- (97) Not working prior to accident
- (99) Unknown

**STOP - GO TO VARIABLE 44 ON PAGE 7****VARIABLES 39 THROUGH 43 ARE COMPLETED BY THE ZONE CENTER****39. Time to Death** 00

- \_\_\_\_\_ Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 + n up through 30 days = 60)
- (00) Not fatal
- (96) Fatal - ruled disease
- (99) Unknown

**40. 1st Medically Reported Cause of Death** 00**41. 2nd Medically Reported Cause of Death** 00**42. 3rd Medically Reported Cause of Death** 00

- \_\_\_\_\_ Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death
- (00) Not fatal or no additional causes
- (97) Other result (includes fatal ruled disease) (specify):  
\_\_\_\_\_
- (99) Unknown

**43. Number of Recorded Injuries for This Occupant** 00

- \_\_\_\_\_ Code the actual number of injuries recorded for this occupant.
- (00) No recorded injuries
- (97) Injured, details unknown
- (99) Unknown if injured

**AUTOMATIC BELT SYSTEM**44. Automatic (Passive) Belt System Availability/ Function 0

- (0) Not equipped/not available
- (1) 2 point automatic belts
- (2) 3 point automatic belts
- (3) Automatic belts - type unknown

*Non-functional*

- (4) Automatic belts destroyed or rendered inoperative
- (9) Unknown

45. Automatic (Passive) Belt System Use 0

- (0) Not equipped/not available/destroyed or rendered inoperative
- (1) Automatic belt in use
- (2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify): \_\_\_\_\_
- (3) Automatic belt use unknown
- (9) Unknown

46. Automatic (Passive) Belt System Type 0

- (0) Not equipped/not available
- (1) Non-motorized system
- (2) Motorized system
- (9) Unknown

47. Proper Use of Automatic (Passive) Belt System 0

- (0) Not equipped/not available/not used
- (1) Automatic belt used properly
- (2) Automatic belt used properly with child safety seat

*Automatic Belt Used Improperly*

- (3) Automatic shoulder belt worn under arm
- (4) Automatic shoulder belt worn behind back
- (5) Automatic belt worn around more than one person
- (6) Lap portion of automatic belt worn on abdomen
- (7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify): \_\_\_\_\_
- (8) Other improper use of automatic belt system (specify): \_\_\_\_\_
- (9) Unknown

48. Automatic (Passive) Belt Failure Modes During Accident 0

- (0) Not equipped/not available/not in use
- (1) No automatic belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): \_\_\_\_\_
- (6) Broken retractor
- (7) Combination of above (specify): \_\_\_\_\_
- (8) Other automatic belt failure (specify): \_\_\_\_\_
- (9) Unknown

49. Seat Orientation (this Occupant Position) 1

- (0) Occupant not seated or no seat
- (1) Forward facing seat
- (2) Rear facing seat
- (3) Side facing seat (inward)
- (4) Side facing seat (outward)
- (8) Other (specify): \_\_\_\_\_
- (9) Unknown

**STOP - VARIABLES 50 THROUGH 52 ARE COMPLETED BY THE ZONE CENTER**

**TRAUMA DATA**50. Glasgow Coma Scale (GCS) Score 00  
(at Medical Facility)

- (00) Not injured
- (01) Injured - not treated at medical facility
- (02) No GCS Score at medical facility
- (03-15) Code the actual value of the initial GCS Score recorded at medical facility.
- (97) Injured, details unknown
- (99) Unknown if injured

51. Was the Occupant Given Blood? 1

- (1) No - blood not given
- (2) Yes - blood given (specify units): \_\_\_\_\_
- (9) Unknown if blood given

52. Arterial Blood Gases (ABG) - HCO<sub>3</sub> 00

- (00) Not injured
- (01) Injured, ABGs not measured or reported
- (02-50) Code the actual value of the HCO<sub>3</sub>
- (96) ABGs reported, HCO<sub>3</sub> unknown
- (97) Injured, details unknown
- (99) Unknown if injured

ARE ALL APPLICABLE MEDICAL RECORDS INCLUDED WITH INITIAL SUBMISSION?

NO [ ] YES [ ]

UPDATE CANDIDATE?

NO [ ] YES [ ]